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No. 1229

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'SEL'SKAYA ZHIZN' REVIEWS LATE MARCH WEATHER, CROP DEVELOPMENT

LD141007 Moscow SEL'SKAYA ZHIZN' in Russian 4 Apr 80 p 1 LD

[Report by agrometeorologist N. Sakharova under rubric "The USSR Hydrometeorological Center Reports": "Weather and Crops"]

[Text] It continued cold on the USSR's European territory in the last 10 days of March. In the latter half of that period the temperature began raising gradually, and during the day it stood at 2-8 degrees almost everywhere. The last days of March were very warm in southern Moldavia, Transcarpathia, the southern Ukraine, the north Caucasus and the south of the lower Volga region. There was precipitation everywhere.

In the Crimea, Zakarpatskaya oblast, Krasnodarskiy and Stavropolskiy krays, the north Caucasus autonomous republics and southern regions of the Kalmytskaya ASSR winter grain crops resumed vegetation later than normal. On individual days, when the air temperature rose to 9-14 degrees, winter crops began vegetating in southern regions of Moldavia and of Odesskaya, Nikolayevskaya, Zaporozhskaya, Rostovskaya and Astrakhanskaya oblasts and in Khersonskaya and Lvovskaya oblasts. In the remaining regions of the USSR's European territory winter grain crops were in a state of winter dormancy.

South of a line linking Lvov, Chernovtsy, Kirovgrad, Zaporozhye, Rostov-na-Donu and Guryev fruit crops emerged from their winter dormancy and their development began in places. In the south Crimea, the extreme western Ukraine and the north Caucasus apple, cherry, sweet cherry, apricot, peach, plum, cherry plum and persimmon trees were in full bud, and in some places the buds had burst.

The weather grew warmer in agricultural regions of west Siberia and in Kazakhstan. Precipitation continued to be slight. Winter grain crops in west Siberia were in a state of winter dormancy under snow cover, which was primarily 15-30 cm thick.

In the Transcaucasian and Central Asian republics the warm weather with rain was favorable for the growth and development of winter grain crops.

The top 1-meter stratum of soil contained 130-160 mm and more of moisture. Grasses are growing intensively. During the 10-day period their height increased by 5-15 cm in southern regions of Turkmenia and Uzbekistan and by 20 cm in places in Turkmenia.

On fruit crops in Central Asia buds are bursting and leaves developing.

CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

UZBEKISTAN FARMERS' PLANS FOR EARLY HARVEST

Moscow SEL'SKAYA ZHIZN' in Russian 13 Mar 80 p 1

[Article by A. Uzilevskiy (Uzbek SSR): "Thus An Early Harvest Is Created"]

> [Text] The farmers of Uzbekistan are effectively utilizing each hour of spring and they are introducing progressive scientific achievements and leading experience into their operational practice.

During the first days of March, the brigade headed by Khushbak Rakhimov at the Surkhan Sovkhoz in Surkhandar'inskaya Oblast completed its corn sowing work. Was this not early? "No" replied the brigade leader, "The seedlings are on the verge of appearing."

The brigade had risked nothing. Acting upon the advice of an agronomist, the brigade workers began making preparations for an early sowing during the autumn. The land was plowed using a double-level plow and both mineral fertilizer and farmyard manure were applied during the autumn plowing. Water supply irrigation was carried out in February and prior to sowing the soil was loosened in a manner so as to permit it to warm up twice as fast. This is ensuring early seedlings.

The brigade gained a week using this method. Thus the crop will ripen earlier (it bears mentioning that the brigade plans to obtain no less than 100 quintals of grain per hectare). Following the harvest, a secondary sowing will be carried out on the arable land for the purpose of obtaining no less than 400 quintals of silage bulk, with ears of milky ripeness, in the autumn.

All of the Uzbekistan farmers have assigned themselves the goal of obtaining early harvests. This goal is sound and it has been verified by experience. Early sowing and early seedling development enable the plants to better endure heavy showers and cold snaps. And in recent years, such events have been occurring on a more frequent basis. Well developed plants are less susceptible to diseases, particularly cotton wilt, and they are better able to withstand drops in temperature and hot desert winds. Certainly, the harvesting of a crop at an early date, prior to the autumn rains and frosts, serves as a protection against losses and guarantees high quality products.

In conformity with this goal, the republic's farms have made intense preparations for their sowing work and they have endeavored to improve upon the established schedules and to carry out the entire complex of pre-spring work in a high quality manner. Autumn plowing combined with mineral fertilizer applications was carried out on the entire area set aside for cotton. More than 1 million hectares of saline land were desalinized. In five oblasts where the degree of field salinization was especially high, soil leaching work was carried out two and three times. Reserve waterings have already been applied to more than 600,000 hectares of land to be used for cotton. Water supply irrigation is continuing. Hundreds of long-base machines were used for carrying out levelling work. Approximately 20 million tons of organic fertilizers were placed in storage for pre-sowing and vegetative applications to the soil. Repair work on the sowing units was completed within the planned periods. Compared to last year, tens of millions of more vegetable plants will be grown this year.

The mass sowing of grain crops is commencing at the present time. The kolkhozes and sovkhozes are striving to sow their wheat, barley, alfalfa and corn and to plant their vegetables and potatoes. The volume of work is tremendous; it is measured in many hundreds of thousands of hectares. Moreover, those lands which were not plowed during the autumn owing to a late harvest must now be plowed in a hurry.

Farms in the southern zone of Uzbekistan are presently engaged in sowing their wheat. They are using seed from regionalized varieties. This includes Krasnovodopadskaya-210 wheat and Sholpan barley. At the large-scale grain Sovkhoz imeni Karl Marks in Kashkadar'inskaya Oblast and on other farms, the units have been staffed with crews for double-shift operations. The daily tasks are being over-fulfilled.

But the principal grain crops will come from the winter fields, which occupy 840,000 hectares of non-irrigated and irrigated land. The mass tillering of the grain crops has commenced on the irrigated fields. The farms in Surkhandar'inskaya, Andizhanskaya and Namanganskaya oblasts are applying an early spring top dressing to their winter crops. This work has already been completed in a number of rayons. But the farms in Bukharskaya, Tashkentskaya and Syrdar'inskaya oblasts are performing this work in an unjustifiably slow manner. On some tracts in Samarkandskaya and Dzhizakskaya oblasts, where the winter crop seedlings are sparse, no further delays should be tolerated in carrying out undersowings.

The sowing of corn is being expanded noticeably throughout the republic this year. In the Surkhan Valley alone, it will be grown on 6,000 more hectares than was the case last spring. The farms plan to expand considerably their production of corn grain and in this manner increase their forage funds. The early sowing of corn will serve not only to provide a more generous yield (it is recalled that in recent years it amounted to an average of 70 quintals per hectare for the republic), but in addition it will make it possible to obtain, by virtue of a secondary sowing on the same irrigated fields, a second harvest of corn for silage.

The vegetable growers are striving to produce greater quantities of early produce than was the case last year. Towards this end, the vegetable plantings under plastic have been expanded this year. It is expected that cucumbers, cabbage, potatoes, radishes and table greens will be shipped to the trade network in just 30-45 days from now. Unfortunately, industry is by no means fully satisfying the plastic requirements of the Uzbek vegetable growers, despite the fact that local conditions are especially favorable for the production of extra-early vegetables. The planning and supply organs must consider this possibility when allocating funds.

Only a short period of time remained prior to the mass sowing of cotton, which occupies more than two thirds of the irrigated fields in Uzbekistan. This year the plans call for 5.85 million tons of raw cotton to be obtained, 90,000 more tons than last year, and for the average cropping power to be raised to 32 quintals per hectare. It is understandable that, considering the high level achieved, each percent of increase requires special expertise and diligence. The leading farms, rayons and oblasts are characterized by these qualities. They are placing new methods in operation and introducing progressive technologies. The farmers in Tashkentskaya Oblast carried out double-level fall plowing on all of the cotton fields. A number of operations are presently being carried out in all areas: early spring harrowing, applications of rotted farmyard manure, subsoiling and disking of the shoulders and edges of beds.

The experience of recent years has shown that the growing of cotton in rows and ridges makes possible early sowing and, it follows, early ripening and harvesting of the crop. With a larger area of solar warming, the soil ripens earlier than it does on a smooth field. A soil crust does not form on ridges following heavy showers -- the water runs off the slopes into deep furrows and is borne away into collectors.

An expansion of the ridge method is fully justified for this year and it will produce an increase in the crop and a ripening of the crop ahead of the usual schedules.

An important feature of this year's sowing campaign is more extensive precision sowing and the introduction of a number of promising varieties having a raised early ripening capability, productivity and resistance to diseases. However, concern is being aroused regarding the delays taking place in the pre-sowing preparation of the seed at enterprises of the republic's Ministry of the Cotton Cleaning Industry. Not all of the farms have been provided with precision sowing machines and yet the planting of the seed on an accurate basis releases the cotton growers from having to participate in a laborious and prolonged process -- thinning out of the seedlings.

The cotton sowing period is approaching. In the very near future the sowing units will make an appearance on the fields in the republic's southernmost Surkhan-Sherabadskaya Valley. Here the equipment has already been moved out to the field camps. By the end of the month, the kolkhozes and sovkhozes in the entire southern and central zones of Uzbekistan will have commenced their sowing work. The republic's farmers are fully resolved to commemorate this present season with ahead-of-schedule fulfillment of the production plan for all crops and all branches of production. They are striving to utilize each spring hour in an efficient manner.

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CSO: 1824

SPRING FIELD PREPARATIONS IN TADZHIK SSR

Moscow SEL'SKAYA ZHIZN' in Russian 7 Mar 80 p 1

[Article by K. Madaliyev (Tadzhik SSR): "In the Valleys of Tadzhikistan"]

> [Excerpts] With each passing day, the sun's rays are providing more warmth in the Tadzhik SSR and warm winds are circulating in the valleys. The winter crops are developing in a fine manner, the alfalfa is turning a bright green in color and the almond trees are blossoming in the extreme south. Taking advantage of each fine day, the farmers, as early as February, began preparing their soil and sowing their early grain and grass crops. With the exception of the mountainous areas, field work is now being carried out in all of the republic's rayons.

Last year the republic over-fulfilled its socialist obligation for selling cotton to the state and still six of twenty-seven rayons failed to carry out their planned tasks. Approximately one third of all of the kolkhozes and sovkhozes remained in debt to the state.

The following facts were cited during a recent conference for agricultural workers. The Moskva and Leningrad kolkhozes in Kanibadamskiy Rayon of Leninabadskaya Oblast, which operate under roughly the same soil-climatic conditions, obtained 33 and 22 quintals of cotton per hectare respectively. Compared to leading farms, the cropping power of backward farms in certain rayons of Kulyabskaya Oblast and in the Gissar Valley was lower by 10-8 quintals. One of the principal tasks confronting the cotton growers is that of eliminating such differences.

This year the farmers of Tadzhikistan have vowed to produce and sell to the state 903,000 tons of raw cotton, with 300,000 tons of this amount being obtained from fine-fibred varieties. The plans call for a further increase in the cropping power of the grain crops by expanding the growing areas for short-stalk wheats of the intensive type and introducing secondary sowings on irrigated lands on an extensive scale.

The time is at hand for carrying out the various plans and hundreds of sowing crews are already at work out on the fields. On the overwhelming majority of the farms, the soil preparation work has been completed and local fertilizers are being laid away for the purpose of applying early top dressings to the cotton. However, some of the work has fallen behind.

A review of operational data reveals that some operations are being carried out very slowly at a large number of kolkhozes and sovkhozes in Kurgan-Tyubinskaya, Kulyabskaya and Leninabadskaya oblasts and in the Gissar Valley: removal of silt from the land reclamation network, leaching of saline lands and reserve waterings. A difficult situation has developed in connection with preparation of the cotton seed. Only one half of the planned quantity of such seed has been improved to the required conditions at the Kurgan-Tyube, Kanibadam, Kulyab and Khodzhentskiy cotton plants.

During the course of recovering lost ground, some enterprises are sacrificing quality. In particular, national controllers have uncovered sub-standard production operations at the Kurgan-Tyube Cotton Plant. Five hundred tons of prepared cotton seed from fine-fibred varieties had a fractionation rate ranging from 5.7 to 7.5 percent, considerably higher than the norm. Such seed cannot be sown -- the sparse plantings would not produce a high yield.

Chemical disinfection work is being carried out on a tardy basis and the plan for preparing bare seed is being disrupted. Instead of 1,000 tons, as yet only slightly more than 300 tons have been procured. Last year the seed control service rejected one third of this type of seed and this brought about a reduction in the area of precision sowing. Time is still available for avoiding a repetition of earlier mistakes and for rapidly correcting the situation.

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TURKMEN FARMERS RUSH TO COMPLETE COTTON SOWING

Moscow PRAVDA in Russian 2 Apr 80 p 1

[Article by correspondents A. Grachev and M. Bodryy, Turkmen SSR: "The Planting Is Not Giving Us Any Respite"]

[Text] Winter in the south of the country has been unusually long. Now agricultural workers are making up for lost time. The sowing of early vegetables, alfalfa, and cereal crops is underway in rayons in the middle reaches of the Amudar'ye, the Murgabskiy Oasis, and the Karakum Canal zone. Potato planting is in progress. These operations must be completed by the end of the mass cotton sowing.

Cotton is the republic's leading crop. Special attention is now being paid to the area planted to it. In this last year of the five-year plan rural workers have decided to harvest 1.21 million tons of the "white gold." Collectives on the majority of farms completed preparing the irrigation system as early as last fall, and pre-sowing operations have now started everywhere.

In Chardzhouskiy Rayon the planning of the acreage the cutting of furrows, and harrowing are proceeding without serious obstacles thanks to the skillful maneuvering of equipment. The leaching of the soil is being carried on around the clock.

Matters are proceeding equally well in many other rayons. But the pace of preparations for spring sowing is slower than last year for the republic as a whole. Leaching waterings have not been conducted on a third of the saline areas. And it will soon be time to sow, you see. If the fields are not freshened early, their fertility deteriorates sharply. This explains to a large degree the low cotton yield on a number of farms in the Tedzhenskiy Oasis and the Prikopetdagskaya Plain where last year a total of 10 to 15 quintals of the raw material was harvested per hectare.

Ch. Kurdov, chairman of the Tedzhenskiy Lenin Yely Kolkhoz, summarizes the farm's preparedness for spring. On paper the plowing, planning, fertilizer application, and tractor repair have been completed. But in fact it turned out that the fields were badly planned, and the soil is unevenly moist. The equipment is scattered and is not used comprehensively. Efficient servicing of the machines and machinery has not been assured.

The repair, cleaning of the farm's internal irrigation system, soil planning, and preparation of the plots to receive water have not been completed in Maryyskaya Oblast, the largest cotton planting oblast, and tens of thousands of hectares of irrigated land have not been plowed in Tashauzskaya Oblast. As a rule, the organizing role of party committees and bureaus and of the executive committees of local soviets of people's deputies is weak in lagging farms and rayons. They utilize equipment and irrigation systems badly here.

Baydzhan Atabalov, hero of socialist labor and brigade leader of the Maryyskaya Oblast Ashkhabad Kolkhoz says:

"The spring sowing is not called the foundation of the harvest for nothing. We are completing it at the best time and are sowing seed in well prepared soil. Therefore, our brigade annually reaps a harvest of 50 or more quintals of top quality raw material from each hectare."

The time for spring sowing has been delayed by the cold this year. But the situation must not be considered hopeless. There is still time to sow cotton during the best time in April. We must exert great effort to do this. First of all we must use the equipment better, according to a tightened schedule. We must disseminate and introduce the experience of leading workers and innovators more actively. B. Atabalov's brigade calculates that by Lenin's jubilee it will have obtained sturdy shoots of cotton on its plantations and will have begun to care for the plants.

Bad weather has made substantial changes in the plans of southern agricultural workers. Therefore, it is necessary within periods shortened to the maximum to make up what has slipped by because of the bad weather. Cotton seed have already been planted on the first thousands of hectares. The tense time for the sowing is ahead. Spring is not giving the agricultural workers any respite.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

AZERBAIJAN FARMERS PREPARE FOR SPRING PLANTING

Moscow IZVESTIYA in Russian 2 Apr 80 p 1

[Article by special correspondent Z. Kadymbekov, Azerbaijan SSR: "A High Level of Field Work"]

[Excerpts] Winter in the Azerbaijan subtropics, the main vegetable growing zone of the republic, was mild and warm. The sun shone brightly in the middle of January as if it were spring. In the beginning of March the rain suddenly set in and it even snowed. All this delayed the planting of the seedlings in open ground almost 20 days. Therefore, a fast pace of work has been set on all the farms now that the sun has begun to shine again.

All agricultural workers in Azerbaijan have begun the campaign for a high yield during this spring period. The winter crops are in good condition. They are now being top-dressed and watered. Everything is being done to guarantee the grains' accelerated growth.

It is almost time for the mechanizers to take the sowing units to the cotton fields. The plowed field has been prepared well for the sowing; the land has been leached, and moisture-charging waterings have been carried out. In many cotton planting rayons the equipment has been repaired well and is ready to go.

Last year viticulturists also achieved record indicators -- they came close to the million ton mark for the sun-drenched berries. This is the result of intensifying production specialization and concentration.

Bad weather conditions complicated the work of the agricultural workers. The time left for planting cotton, vegetables, corn, and several other crops naturally is shorter. This situation requires maximum mobilization of forces, efficiency, and organization on the part of field workers. It is precisely these qualities that last season when the weather was capricious as never before made it possible for republic agricultural workers to achieve record yields and to show that it is within their power to overcome any difficulties.

This year spring has been a happy, bright time for all republic workers. Quite recently they received hearty congratulations from Leonid Il'ich Brezhnev for early completion of the Tenth Five-Year Plan for industrial and agricultural production. The republic was awarded the nation's high decoration -- the Order of Lenin. Azerbaijan is honorably preparing for the 110th anniversary of the birth of V. I. Lenin, and the 60th anniversary of the republic and the Communist Party of Azerbaijan. Agricultural workers are now going out to the field with a tremendous desire to raise a record crop in this jubilee year.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

STATUS OF SPRING FIELD WORK IN KUBAN' REGION REVIEWED

Moscow SEL'SKAYA ZHIZN' in Russian 6 Mar 80 p 1

[Article by Yu. Semenenko (Krasnodarskiy Kray): "Spring in the Kuban'"]

> [Excerpts] The sowing units have been moved out onto the kray's fields. Mineral fertilizer top dressings have been applied to one and a half million hectares of winter grain crops. This year the leading farms, teams and brigades are competing to obtain 50 quintals of grain per hectare.

The breath of spring is becoming more noticeable in the Kuban'. The soil is drying out and hundreds of units are moving out onto the fields -- in the southern rayons the arable land is being prepared and the sowing of early spring crops carried out and in the northern zone the work of applying a top dressing to the winter crops continues.

The mass check carried out recently on the status of the winter wheat and barley crops revealed that they wintered very well. However, the results of soil analyses revealed a deficit of nitrogen in the soil. Thus, nitrogen and complex mineral fertilizers are being applied to stimulate plant growth. The following information was furnished by the kray's agricultural administration: a top dressing has been applied to the winter crops on 1.5 million hectares. On those fields intended to be used for obtaining strong grain (there are more than 700,000 hectares of such plantings in the kray), fertilizer is being applied a second time. Many farms are applying root top dressings to their wheat and this is producing especially high increases in yields.

The farmers in Mostovskiy Rayon are performing their field work in an organized manner. Not waiting for the soil to dry out on all of their lands, they are taking advantage of each good hour of time to carry out moisture retention work, cultivate and level the soil and sow as much peas and oats as possible. None of the machine operators require prompting. They are all aware of the importance of fully utilizing each moment of time during this present period. Within a brief interval of time, the rayon's kolkhoz and sovkhoz workers succeeded in sowing almost one half of the area set aside for peas and oats. The preparation of ridges for potatoes is proceeding at a high tempo.

Good news is being received from Anapskiy Rayon and work is being carried out at a feverish pace on fields in Krymskiy Rayon.

The Kuban' rice growers, who this year vowed to produce 1 million tons of "white grain," have moved out onto their fields. The workers at specialized farms are completing their work of cleaning canals and repairing hydraulic engineering installations and the irrigation network. The following work is in full swing -- ridging of intra-check plot channels, subsoiling and levelling off of the check plots. Special attention is being given to those areas where the rice must be sown very early and with deep placement of the seed. This method furnishes a noticeable increase in yield.

The timely and high quality repair of equipment is promoting harmonious work out on the fields. Practically all of the kray's kolkhozes and sovkhozes succeeded in preparing their machines for spring. A mutual check carried out recently revealed that the required technical norms were observed in carrying out the repair work. Working plans were composed on each farm and they were corrected taking into account the dry spring conditions. In addition, technological charts were prepared and units assembled.

In that many farms are experiencing a deficit of moisture in the soil, special importance is being attached this year to the rates for carrying out the field work. Quality is also of equal importance. The Kuban' grain growers are employing leading agro-technical methods -- cultivation by layers and thorough levelling off of the soil, complete destruction of weeds. The farms are successfully employing the VNIS-R type harrow and other agricultural implements which dry out the soil to a negligible degree. Liquid organo-mineral mixtures are being employed extensively. The sowing work is being carried out using first class seed of regionalized varieties. During recent seminar-conferences held in the kray, the Adygeyskaya AO and in various rayons, where discussions were held on methods for raising the yields being obtained from Kuban' fields, the tactical methods were further refined and specific measures were outlined for introducing scientific achievements and leading experience into operations. These same problems were examined in detail during meetings of the party-economic aktiv at kolkhozes and sovkhozes.

In a number of measures concerned with achieving a substantial increase in cropping power, an important place is occupied by work aimed at raising the fertility of the Kuban' chernozem soils. Last year the kray's grain growers plowed 32 million tons of organic fertilizers into the soil, or an average of 7 tons per hectare of arable land. Last year, in less than 2 months, 5 million tons of organic fertilizer were moved out onto the fields and stored. Many farms have begun adding this valuable fertilizer to the soil.

"We view the early part of March, at which time a portion of the spring field work is carried out, as a dress rehearsal prior to the mass sowing of crops. It is gratifying to note that the field work is being carried out in an organized manner, with each machine operator and sower performing at maximum capability and striving to make a worthy contribution towards fulfillment of the high socialist obligations" stated the chairman of the kolkhoz, A.N. Smola.

The field work being carried out in the Kuban' is increasing in tempo.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING FIELD WORK IN STAVROPOL'SKIY KRAY

Moscow SEL'SKAYA ZHIZN' in Russian 8 Mar 80 p 1

[Article by S. Timofeyev (Stavropol'skiy Kray)]

> [Excerpts] The weather in Stavropol'skiy Kray is still capricious: at times the sun shines, ground winds blow or the earth is covered by a cold fog. Nevertheless, spring is asserting itself and lines of harrows and sowing units are standing alongside the awakening fields. The agronomists are checking their spring crop seed again and again, the machine operators are carrying out their last mutual inspections and a top dressing is being applied to the winter crops.

This year the farmers in Petrovskiy Rayon have vowed to produce considerably more grain, sunflowers, vegetables and silage crops than they produced last year. The campaign to achieve high yields was begun back during the autumn months, at which time the machine operators sowed the winter crops on 88,000 hectares during the best periods. In all areas, the plants bushed out well and also endured the winter conditions very well. A top dressing is presently being applied to the wheat fields in all areas and the units to be used for harrowing and packing the soil have all been made ready.

A type of rehearsal for the busy spring period was carried out in advance on many of the farms -- during the brief February "windows."

The principal production subunits in the rayon are now the mechanized detachments, each of which operates on an enlarged crop rotation plan field some 6,000-8,000 hectares in size. The detachments include teams which specialize in the cultivation of corn, sunflowers, sugar beets and other crops. The organization of the competition, the wage system based upon the harvest obtained and quality control have all received adequate thought and study.

The period immediately prior to the mass sowing work always involves difficulties -- only 71 percent of the seed meets the requirements for first class, while at the same time there is a shortage of seed in Turkmenskiy, Budennovskiy and Apanasenkovskiy rayons. The state came to their aid and allocated the required amounts. This material must quickly be brought to the required sowing conditions and chemically disinfected.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING FIELD WORK, SOWING PREPARATIONS IN ROSTOVSKAYA OBLAST

Moscow SEL'SKAYA ZHIZN' in Russian 22 Mar 80 p 1

[Article by Yu. Maksimenko (Rostovskaya Oblast): "And the Field Responds With a Harvest"]

> [Text] The grain growers in the Don River region have launched a mass competition this year for obtaining high yields of grain and forage crops and for the organized carrying out of the spring sowing work.

During the month of March, the Don Steppe region is full of contrasts. In the south the land is thawing out and the furrows of the fall plowing are black in color in all areas. In the eastern portion of the oblast and along the upper reaches of the Don River, the fields are still covered with snow and strong frosts prevail at night. The grain growers repeatedly check the readiness of their equipment and seed and also the operational reliability of their units. The machine operators are working out the various problems and developing the plans for sowing and tending the crops. The farmers wish to make up for last year's shortfall in grain and feed and to obtain a greater return from each hectare of agricultural land.

"Serious concern is being displayed for the grain" stated one of the oblast's better known masters of high yields, Grigoriy Pavlovich Bezuglyy, manager of the 3d Department at the Kolkhoz imeni Kalinin in Zernogradskiy Rayon, "All preparations have been made for the sowing work. For 4 years of the five-year plan, we obtained 48 quintals of grain from each hectare and this year we plan to obtain 50 quintals.

The school of leading experience, which was created several years ago by the collective of Bezuglyy's department, has been attended by many brigade leaders and managers from various farms throughout the oblast. They are convinced that success is based upon a progressive agricultural complex. This includes more productive varieties, first class seed, efficient soil cultivation systems and fertilizers. It also includes the ability to select the best periods for sowing, tending the winter crops and gathering in the harvest without losses. In short, a field responds with a high level of fertility when a high culture of labor is employed. For this current spring period, the department acquired seed for new varieties of barley, corn and forage crops, all of which will furnish a worthy increase in output.

With each new spring day, greater intensity is being observed throughout the oblast in connection with the competition to raise the culture of farming, which was begun based upon initiative displayed by the grain growers in Azovskiy Rayon, and to achieve stable yields and maximum harvests for the grain and other crops. Hundreds of departments, brigades, kolkhozes and sovkhozes have already joined in this movement. This year the workers in the Don River region have vowed to produce 9 million and to sell to the state no less than 3.6 million tons of grain, including 1.6 million tons of strong and valuable wheats, 592,000 tons of sunflower seed and 550,000 tons of vegetables. What is the basis for these figures?

We were informed by the agricultural production administration of the oblast executive committee that a firm base has been established for the future harvest. The kolkhozes and sovkhozes are increasing their grain fields, expanding their plantings of the more productive varieties and introducing progressive technologies for the cultivation of crops. The fertility detachments have moved 20 million tons of organic fertilizers out onto the fields -- more than in past years. All of the spring crop fields were plowed in the autumn. The oblast has been supplied with seed, the readiness of its machine-tractor pool is better than in previous years and it possesses fine experience in the use of equipment based upon the Ipatovo method.

In developing their plans, the farmers are giving due consideration to the peculiarities of this present spring period. Owing to cold weather, the start of the field operations was delayed. This raised the need for a high work tempo and reduced periods for carrying out the work, with the prescribed agricultural practices being observed in a very strict manner. Sowing complexes may be of assistance in achieving these goals. More than 2,000 such complexes will participate in the sowing work.

The Don River region farmers have undertaken the following task -- to utilize each moment of spring in a highly productive manner and to sow their early spring crops in 80-100 hours, sunflower seed -- in 4-5 days and corn -- in 7-8 days. The feasibility of these periods is borne out by the experience accumulated at the well known Gigant Sovkhoz and at the kolkhozes imeni XX Parts"yezda and Orden Lenina in Orlovskiy Rayon, which annually carry out their sowing operations in an efficient rhythm.

The initial reports have been received from the southern rayons: the work of applying an early spring top dressing to the winter crops has commenced. This work must be carried out on the entire area, including 1.6 million hectares using the root method, with an agricultural complex being employed for growing high quality grain. Approximately 5,000 fertilizer distributors were equipped for this purpose and fertilizer procured. The specialists established daily monitoring of the status of the crops and their emergence from winter hibernation. On each farm, strict control was established over the spring tending of the winter crops, crop protection against pests, diseases and weeds and the creation of conditions for ensuring healthy plant growth and development.

The eve of the mass sowing operations did not pass without vexing miscalculations.

Recently, highly productive varieties of barley, corn and pulse crops were regionalized throughout the oblast. However, low productivity varieties predominate in the commodity plantings of many farms. For example, in addition to Odesskiy-36 barley, which occupies the principal areas, Gossortset' [State Strain Testing Network] supplied production with new varieties -- Odesskiy-69, Donetskiy-6 and Zernogradskiy-73, all of which surpass the first variety by 2-5 quintals per hectare. But these varieties are not being introduced in a persistent manner and, as a result, the farms are losing out on tens of thousands of tons of forage grain.

Seed production for peas has not been organized in the oblast. The farms are experiencing a critical shortage of seed for this valuable pulse crop and thus they are having to import such seed from other oblasts and krays. Radical improvements are required in corn seed production and in the construction on the farms of seed-cleaning complexes, covered thrashing floors and granaries. Indeed the Don River farmers plan to produce 1 million tons of corn grain.

The grain and forage fields of the Don River region are awaiting their own particular hour. When it will be this year is dependent upon each grain grower, specialist and leader and upon the degree to which they display initiative, responsibility and interest in isolating additional reserves.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

AZERBAIJAN SSR CROP PRODUCTION PLANS DISCUSSED

Moscow SEL'SKAYA ZHIZN' in Russian 28 Mar 80 p 1

[Article by B. Daminov (Azerbaijan SSR): "During the Best Periods"]

> [Excerpts] The agricultural workers of Azerbaijan, who fulfilled their five-year plan for the sale of grain, fruit and vegetables to the state ahead of schedule, have resolved to respond to the address by L.I. Brezhnev and to the conferring of the Order of Lenin upon the republic, by achieving new successes in their labor. They have been performing their tasks at a high tempo since work first began out on the spring fields and in the orchards and vineyards.

As always, the month of March in Azerbaijan is very capricious. From time to time, the warm days are replaced by cold ones and the clear weather by rainfall and winds, with snow appearing from time to time in the mountainous regions. The farmers engaged in carrying out field work at the present time must utilize every good hour of time to maximum advantage. On the Kura-Araksinskaya Lowland, they have already sown forage crops on more than 60,000 hectares. The seed for alfalfa, sainfoin and fodder beets was sown in well fertilized soil and during the best periods. The farms are rapidly making preparations for the sowing of cotton.

In many rayons where the sowing of early spring crops has been completed, top dressings are being applied to the winter crops and at an accelerated tempo. Such an attitude is fully justified -- last year the republic's farmers were the first to harvest more than 1.2 million tons of grain and this year they intend to ensure that this level is not lowered. Based upon the example of farms in Agdamskiy, Bardinskiy, Sabirabadskiy and Agdzhabedinskiy rayons, which plan to obtain 40 quintals of grain per hectare, a majority of the kolkhozes and sovkhozes have undertaken raised obligations.

Aircraft of agricultural aviation are presently circling above the republic's grain fields, which occupy an area of more than 600,000 hectares, as they apply fertilizer. Meanwhile, fertilizer is being applied at the root layer with the aid of ground equipment.

The land reclamation network is being restored to order on fields on which cotton is to be sown.

More than 730,000 tons of raw cotton were obtained last season throughout the republic, with the production of this crop having increased one and a half times since the beginning of the five-year plan. In the interest of exceeding the level already achieved, a complex of winter and spring agricultural measures was carried out at all of the cotton growing kolkhozes and sovkhozes. In particular, water was supplied to the land to be used for cotton and mineral and organic fertilizers were also applied during the principal plowing, carried out using double-level plows.

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DRY CONDITIONS COUNTERED--Yevlakhskiy Rayon, Azerbaijan SSR--Although winter in Azerbaijan is only a calendar period -- frosts and snowstorms do not occur here -- nevertheless it makes it presence known. This applies in particular to the winter pastures, where the flocks of sheep are located. Owing to the dry autumn period, only scanty stands of grass are to be found on the pastures in almost all of the republic's rayons. But the livestock breeders stored away adequate quantities of coarse, succulent and mixed feed. In those areas where suitable conditions exist for watering, irrigated pastures have been created on which barley and also alfalfa and other grasses are already turning green in color. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 21 Mar 80 p 1] 7026

GEORGIAN SSR SOYBEAN PRODUCTION--Tbilisi, 22 Mar--The farms in Georgia have commenced sowing their soybeans. Together with the machine operators, workers from the republic's Scientific Research Institute of Farming have gone out onto the fields -- they will furnish assistance to the field workers in developing a technology for cultivating this crop. The family crew of I. Strochak, from a kolkhoz in the village of Pervoye Maya in Abashskiy Rayon, is leading in the competition being held for sowing personnel. Based upon the example set by the Kuban' farmers, it was the first in Georgia to introduce an industrial agricultural technique for soybeans. Last year the team achieved an increase of 10 quintals in its per hectare yield. A mass competition for obtaining high yields has been launched in all areas throughout the republic. Soybeans are under cultivation in 37 of the republic's rayons. The scientists have created highly productive varieties of this crop for each of these rayons. For example, for the subtropic regions -- Kolkhidu-4, and for mountainous farms -- Mutant-2. It furnishes high grain and fodder yields on fields located at heights of 1,000-1,200 meters. In all, the Georgian scientists have developed eight new and highly productive varieties of soybeans. Five of them have been regionalized. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Mar 80 p 1] 7026

SPECIAL FIELD TACTICS REQUIRED--Armenian SSR--Warm southern winds are bringing a breath of spring to Armenia and causing the farmers to accelerate their spring preparations. They have begun carrying out their spring field work in a selective manner: applying a top dressing to the winter crops, harrowing and sowing seed in hotbeds for the cultivation of vegetable crop seedlings. The vineyard workers in the Ararat Valley are digging up their vines and the orchard workers are pruning their trees. Under the conditions prevailing in Armenia, the spring work to be carried out in the orchards and vineyards is viewed as being very difficult and important. The changeable weather at times warms the air to 20 degrees, only to be followed suddenly by autumn-like cold showers. On one and the same day, in the same rayon or even on the same farm, one often encounters almost all of the caprices of weather. Certainly, such conditions require the use of special tactics in carrying out the field work. And such tactics have been developed by the local farmers over a period of years. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 12 Mar 80 p 1] 7026

ORGANIC FERTILIZER DELIVERIES--Krasnodar, 21 Mar--Based upon a decision handed down by the kray party committee and the kray executive committee, a special campaign, to last 1 month, has been established for the purpose of transporting organic fertilizers. No less than 5 million tons must be delivered to the fields. All of the fertility detachments of kolkhozes, sovkhozes, interenterprise associations and enterprises of Goskomsel'khoztekhnika are participating in this work. During this month's campaign, many detachments will be supplied with additional units of equipment, units which were available prior to the commencement of the mass field operations. On a number of farms in Leningradskiy, Novokubanskiy, Ust'-Labinskiy and other rayons, the transporting of farmyard manure will be carried out in two shifts. Since the beginning of the year, approximately 10 million tons of organic fertilizers have been delivered to fields throughout the kray and immediately plowed into the soil. In all, 34 million tons of local fertilizers will be applied to the Kuban' fields this year. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 22 Mar 80 p 1] 7026

SOWING OF EARLY POTATOES--Yerevan, 18 Mar--Spring appears to be in no hurry this year -- a touch of cold weather from time to time, including the sudden appearance of snow. But even under these conditions, the leading farms in Masisskiy Rayon are already completing their planting of early potatoes, as they utilize to maximum advantage each good hour of time. In particular, fine work has been performed by the machine operators of a kolkhoz in Arbat Village. The machine operators in such villages as Gekhana, Nizama, Sayat-Nov and Demircha are also maneuvering their equipment in a skilful manner. The rayon's farmers are doing everything possible to ensure the completion of their tuber planting work within 5-6 days. They plan to ship their initial output -- early potatoes -- to workers in cities and at industrial enterprises during the month of May. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 19 Mar 80 p 1] 7026

SELECTIVE HARROWING DELAYED--Stavropol', 22 Mar--The machine operators in Stavropol'skiy Kray have commenced their selective harrowing work. As a result of the prolonged cold weather during March, field operations throughout the kray have commenced considerably later than was the case last year. In the interest of ensuring that the entire agrotechnical complex of spring work is carried out during the best periods in all areas, the farmers concentrated their equipment at the field camps in advance. One thousand mobile complex detachments, equipped with specialized teams for providing preventive maintenance services and carrying out operational repairs on the units, are in a complete state of readiness. This is already the third spring period that the Stavropol' workers have been utilizing their equipment based upon the method employed by their fellow-countrymen -- the workers of Ipatovo. The experience accumulated will enable the kray's grain growers to carry out their harrowing work in a rapid manner and thereafter, using the same condensed schedule, complete their sowing operations and obtain healthy seedlings prior to the onset of the dry steppe winds. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 23 Mar 80 p 1] 7026

FIELD WORK COMMENCES--Cherkessk, 12 Mar--Field operations have commenced on other kolkhozes and sovkhozes located in the Karachayevo-Cherkesskaya AO. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 Mar 80 p 1] 7026

SOWING OPERATIONS CONTINUE--Tskhinvali, Yugo-Osetinskaya AO, 19 Mar--The field crop growers of farms in the autonomous oblast have moved their sowing units out onto the fields. The workers at the Yeredvskiy Sovkhoz were the first in Tskhinval'skiy Rayon to commence the sowing of oats. The sowing of sugar beets, vegetables and other crops has commenced at a kolkhoz in the village of Kauisa. Sowing units are also in operation out on kolkhoz fields in the villages of Kemert and Dzartsema and on other farms. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 19 Mar 80 p 1] 7026

HIGH SOWING TEMPO--Tbilisi, 14 Mar--The farms in the Shirakskaya Steppe region -- the chief grain area of Georgia -- have completed their sowing of spring grain crops. The timely preparation of the equipment and use of the Ipatovo method have promoted a high work tempo for these sowing operations. In particular, fine expertise in carrying out the sowing work has been displayed by a group of machine operators, under the direction of Hero of Socialist Labor N. Melikishvili, at a kolkhoz in the village of Zemo-Keda in Tsiteltskaroyskiy Rayon. Here the equipment is being employed under full workloads and the crews are staffed with experienced sowing specialists. The farms in the northern regions of the republic are also prepared for the sowing of their grain crops. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 15 Mar 80 p 1] 7026

RAISED GRAIN PLAN--Severo-Osetinskaya ASSR--Although the sun is shining much brighter in the north Caucasus, nevertheless the cold weather refuses to give ground. The work must be carried out on a selective basis, with the time remaining before the mass sowing work being used for carrying out the last mutual inspections and for training. The farmers in the Kabardino-Balkarskaya ASSR have established high goals for themselves. The decision has been made to raise the gross yield of grain to 580,000-600,000 tons, including up to 320,000 tons of corn. In order to achieve this goal, the spring crop fields are being expanded by implementing improvements in the crop structure. The plans call for the corn plantations to be increased to 65,000 hectares, with more than one half of this amount being cultivated using an industrial technology. The farmers in the Severo-Osetinskaya ASSR are also making preparations to obtain high yields this year. They are arming themselves with the experience accumulated by the best farms and workers. Recently, a delegation of agricultural workers from the Kabardino-Balkarskaya ASSR paid a visit to the Severo-Osetinskaya ASSR. They visited farms in several rayons, acquainted themselves with the work being performed by the corn growers, shared their own experience and they congratulated friends in connection with the Severo-Osetinskaya ASSR being awarded the Challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, AUCCTU and the Komsomol Central Committee. Labor collaboration and mutual assistance are viewed as very important factors in the campaign being waged by both autonomous republics to achieve high yields by the end of the five-year plan. [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 16 Mar 80 p 1] 7026

COTTON SOWING--Mary. The sowing of fine fiber cotton began today on farms in Maryyskaya Oblast -- the main zone in Turkmenistan producing the most valuable raw material for light industry. Fertilizers and herbicides for combatting weeds are applied to the soil along with the seeds. We plan to conduct operations by the precision sowing method on 65,000 hectares. This will make it possible to eliminate the laborious operation of thinning the shoots. This year 205,000 hectares are earmarked for cotton in the oasis, over half of them for fine fiber varieties. This year there are plans to raise them on virgin land sovkhozes in the Karakum Canal zone. The late spring delayed the beginning of the sowing by almost a week. To catch up kolkhozes and sovkhozes have readied considerably more sowing units for work in comparison with last year. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 27 Mar 80 p 1] 7990

COTTON PLANTING--Ashkhabad. Agricultural workers in the south of Turkmenistan are taking an examination in expertise -- the mass sowing of cotton has begun here. Farms in the main cotton oblasts -- Maryyskaya, Ashkhabadskaya, and Chardzhouskaya -- have been included in it. In order to make up for time lost because of bad weather, more sowing units than last year have been taken out to the field. This makes it possible to curtail the sowing period and to use good days to the maximum. The present spring is characterized by more extensive introduction of the achievements of leading agricultural technology into cotton production. Almost half of the area is to be planted with 90 centimeters between the rows. This will increase labor productivity in cultivating and watering the planted area and free agricultural workers from manual operations -- thinning the shoots. Organic-mineral mixtures are applied to the soil along with the seeds; microfertilizers and herbicides are also applied to some areas. In accordance with the July 1978 decree of the Plenum of the CPSU Central Committee which required an increase in the production of fine fiber cotton, areas planted to it have been expanded and the number of specialized farms increased. It has been decided to sow the fields with new highly productive varieties of this crop. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 3 Apr 80 p 1] 7990

WINTER-CROP TOP DRESSINGS--Chimkent, 21 Mar--The areas devoted to grain crops at kolkhozes and sovkhozes in southern Kazakhstan are increasing in size. Winter crops alone occupy 476,000 hectares -- this is 62,000 more hectares than last year. Top dressings are presently being applied to these crops in all areas. Notwithstanding the inclement weather, nitrogen fertilizers are being applied on a daily basis to 17,000-19,000 hectares. This work is being carried out successfully in Saryagachskiy and Turkestanskiy rayons. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 22 Mar 80 p 1] 7026

SOWING CAMPAIGN COMMENCES--Chimkent, 12 Mar--Spring sowing operations have commenced in southern Kazakhstan. Today the units moved out onto the fields on farms in the Chardarinskaya Steppe region. Almost 400 complex detachments have been created throughout the oblast. So that these detachments may operate on a double-shift basis, more than 2,000 machine operators have undergone training. The Chimkent farmers are employing extensively the experience accumulated at the Sovkhoz imeni Karl Marks, with regard to obtaining two agricultural crop harvests during the summer period. The rye and barley fields, after the harvest has been brought in, are sown in corn in order to obtain green feed. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 Mar 80 p 1] 7026

KIRGHIZ GRAIN PLAN--Osh, 12 Mar--Snowstorms are still occurring on the upper "floors" of the Tyan'-Shan' region, while the tempo of spring field work is increasing in the valleys of the southern part of the republic. Today, festively decorated columns of tractors moved out onto the fields of farms in Batkenskiy Rayon, where the farmers were the first in Kirgizia to commence their sowing of spring grain crops. The grain growers are following their usual schedule -- following the spring period, to move ever higher into the foothills and to sow the grain crops as the soil ripens. The schedule is corrected with the assistance of science. For each zone, the scientists developed highly productive varieties of spring wheat and barley and they developed a technology for cultivating them. The grain growers of Kirgizia, who are ahead of schedule in carrying out their five-year plan for grain production, have vowed this year to raise their gross yield to almost one and a half million tons. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 Mar 80 p 1] 7026

UZBEK SSR SOWING OPERATIONS--Uzbek SSR--More than 300 complex mechanized detachments of kolkhozes and sovkhozes in the southernmost oblast of Uzbekistan, Surkhandar'inskaya Oblast, are carrying out spring field work along a broad front. The detachments contain teams responsible for carrying out soil preparation, sowing and technical servicing work. Since the very first days, use has been made of the high ridge sowing method on fields throughout the oblast. This method guarantees earlier seedlings and precludes the formation of a soil crust. Following rainfall, the sowing of alfalfa, corn and wheat was resumed. In Ferganskaya Oblast, the alfalfa growing area is being increased by 18,000 hectares. The mass sowing of corn is being carried out by specialized brigades at kolkhozes and sovkhozes in Namanganskaya Oblast. [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Mar 80 p 1] 7026

SOWING PLANS REVEALED--Alma-Ata, 27 Mar--The sowing campaign, which began 2 weeks ago in the extreme southern part of the republic, has reached the valleys of the northern Tyan'-Shan' region. The farmers in Talgarskiy, Dzhambulskiy, Iliyskiy and Kurtinskiy rayons of Alma-Atinskaya Oblast have sown grain crops on their initial thousands of hectares of arable land. The Alma-Ata workers are performing their tasks under the slogan: "To cultivate and sell to the state this year 250,000 tons of grain and to over-fulfill to a considerable degree the task for the five-year plan." All of the harvest inputs have been taken into account. Only high quality seed is being sown, mainly of first or second class quality. Phosphorus fertilizers are being applied to the drill rows. The soil is being improved by the addition of mineral fertilizers and humus -- more than 1.7 million tons were moved out onto the fields during the winter, the greatest amount ever delivered. The farmers plan to complete their sowing of all of the spring grain fields, almost 400,000 hectares, in just 5-7 days. They are relying upon efficient use of the equipment. Five hundred complexes, detachments and teams that have been formed on the farms will employ the Ipatovo method. Sowing operations are also being carried out in the republic on the farms in Chimkentskaya and Dzhambulskaya oblasts. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Mar 80 p 1] 7026

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PRIVATE PLOT PROBLEMS IN MOGILEVSKAYA OBLAST

Minsk SEL'SKAYA GAZETA in Russian 30 Mar 80 p 2

[Article by A. Zhil'skiy, head of the public reception room of the Editorial Board for SEL'SKAYA GAZETA, for Mogilevskaya Oblast: "A Private Plot? Yes!"]

[Text] Together with the chief state inspector for procurements and the quality of agricultural products for Mogilevskiy Rayon, Vasiliy Alekseyevich Svadkovskiy, we visited a resident of the village of Il'inka at the Avangard Kolkhoz in this same rayon, Nikolay Sergeyevich Gorbunov. The head of a family for more than 20 years, Gorbunov works as a shepherd. His spouse -- Mariya Aksenovna -- is a field crop grower.

"Well, its a farm" stated Nikolay Sergeyevich, having learned of the purpose of our visit, "A private plot and it is of great assistance to the family."

The Gorbunovs maintain two small pigs and more than two dozen chickens each year. The family always has its own pork and eggs and never needs to purchase meat in a store. Nor do the Gorbunovs buy milk. They have a highly productive milking cow in their cow shed. Last year they sold 3,256 kilograms of milk to the state.

It also bears mentioning that each year the family sells 600-700 kilograms of potatoes to the state. The private plot -- one half of an acre -- is maintained in good condition. The Gorbunovs always have ample quantities of potatoes, vegetables, apples, plums and garden strawberries, so much so that they are even able to share these products with their children living in the city.

"A greater amount of attention is presently being focused on those who maintain private plots" stated Nikolay Sergeyevich, "And this is good. However, there are still many problems in this sphere awaiting solutions."

More than one half of the rural residents have their own plots. This includes pensioners who, two or three times each month, must await their turn for pasturing their private stock, by no means an easy task for elderly persons. This problem has been solved in the Tishovskiy Rural Soviet. Here the executive committee selects the shepherds and concludes seasonal contracts with them. Tracts are set aside on which the private stock of the grain growers are to be pastured. But such concern has been displayed only by this one rural council.

At some kolkhozes and sovkhozes throughout the rayon, definite difficulties are being encountered in connection with the sale to the state of surplus milk obtained from privately owned cows. This was borne out by a signal received from the Komintern Kolkhoz indicating that milk pick-ups had not been organized in the village of Kalinovaya. The people had to carry it to the collection points themselves. However, not all of them were able to do this. A similar situation prevailed at the Kolkhoz imeni Volodarskiy in the village of Staroye Pashkovo.

Fedor Yarosh at the Vendorozh Sovkhoz discusses the difficulties which those who have livestock on their private plots must overcome:

"As a rule, the distribution of haying land tracts for the privately owned livestock is delayed until later Autumn. As a result, we commence cutting the hay in late September or early October. The grass at this time is either overripe or blackened as a result of the early autumn frosts.

Thus I procured hay and still am not authorized to transport it before 15 October. All who are procuring hay from the second cutting carried out on the bottom lands of the Dnepr River are finding themselves in the same position. The sovkhoz leaders obviously fear that, in passing, the sovkhoz hay will also be taken away. But it is not right for every individual to be suspect because of the dishonesty of a few.

The hay must be stored under a roof so long as the weather and roads permit this to be done. However, it is difficult to do this in October and November. Individual owners of private stock decline to use remote inundated meadows that are located 20-40 kilometers from their homes.

It would be far more simple to cut down the aftergrowth by means of joint efforts, using equipment that stands idle at times, and thereafter to transport the feed in an organized manner and issue it to the workers. This would be advantageous to both myself and the state. There would be more milk -- and there would be more milk to sell.

The individual with whom we were speaking was correct. The private plots are of assistance not only to the families. Last year the population in Mogilevskiy Rayon supplied the state with 5,369 tons of milk and during 4 years of the Tenth Five-Year Plan -- 20,115 tons. This is almost the annual program for milk for all kolkhozes in the rayon. The rural workers also sold to the state 1,167 tons of meat, 1,782 tons of potatoes and 3,572 tons of apples.

A well known figure in the rayon is pensioner Anastasiya Filippovna Gomnova of the Kolkhoz imeni Kalinina. On more than one occasion she was the winner in a competition to sell surplus agricultural products to the state. Anastasiya Filippovna manages her private plot in the correct manner. She usually raises one young pig to satisfy her own meat requirements, while at the same time raising a he-calf and another young pig for delivery to the state. Last year, it delivered 3,562 kilograms of milk, more than 1 ton of potatoes and 2,250 kilograms of apples to the receiving points.

As is known, it is profitable to sell surplus agricultural products to the state. In addition to money, the population also obtains mixed feed in the form of counter trade for the sale of such products. Goods that are in short cupply, especially carpet items, are issued to the most active suppliers of milk. For its part, the kolkhoz administration also strives to stimulate the people: a half kilogram of straw is issued for each kilogram of milk delivered. Approximately 0.15 of a hectare of haying land of the second cutting is allotted and fuel shipment privileges are extended. The milk collectors are also economically interested in the results of their work. For each kilogram of milk purchased, they receive 2 kopecks, for the washing of dishware -- 33 kopecks and for a trip -- 1 ruble.

Unfortunately, the number of cattle has decreased recently. Here is some statistical data: in 1971, there were 11,624 cows being maintained on a privately owned basis by residents of Mogilevskiy Rayon, in 1976 -- 10,207 and this year -- 9,271. Thus the individual-owned herd decreased by 2,353 head during the 9-year period. When one considers that each cow furnishes up to 3,500 kilograms of milk annually, then it is easy to understand that the shortfall in milk amounted to several thousands of tons for the 9-year period. Those who sold their cows are today buying their milk in stores.

This data arouses serious reflection. The rayon leaders and the local soviets of workers' deputies must thoroughly investigate the reasons why the rural residents are rejecting the private plots and they must provide them with assistance. It is no secret that the youth in particular dislike the private plots. Very few of the young rural specialists are burdening themselves with the care of a kitchen garden or livestock. This psychological barrier must be overcome. More important is the fact that conditions are available here for maintaining various types of livestock on the private farms.

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TILLING AND CROPPING TECHNOLOGY

TECHNOLOGY IMPROVES SUNFLOWER CROP

Kiev SIL'S'KI VISTI in Ukrainian 8 Feb 80 p 1

[Article by V. Mel'nyk, head of the Voroshilovgradskaya Oblast Plant Protection Station on: "Raising Sunflowers"]

[Text] Soon farmers will begin their spring field work. Machine operators will start sowing sunflowers. Meanwhile, farms are preparing high-quality sowing material.

Seed is the golden harvest stock. Farmers in the Voroshilovgrad area treat it this way, striving to fulfill all commitments on the increase of sunflower production in the concluding year of the five-year plan. The practical experience of kolkhozes and sovkhozes in the Kremins'koy rayon merits particular attention. In the fall and winter field workers carefully clean and calibrate the sowing material, bringing up moisture to 7-8 percent.

Priority is given here to the treatment of seed with preparations against grey and white rot, false mealy dew and against pests, since many plant pathogens are transmitted from generation to generation with the seed (causing considerable crop shortfall), To provide for high effectiveness of this agricultural measure in the rayon (at the suggestion of the oblast plant protection station workers) a centralized chemical treatment of the sowing material has been practiced for several years now. It is done as follows: In the spring, when it turns warmer (a month and a half prior to sowing) at the kolkhoz imeni Kalinin the RS-100 machine is put to efficient and continuous work. According to a schedule arranged by the rayon plant protection station, farms deliver here first-quality, calibrated seed and receive it back the same day after it has been treated with a preparation under the direct supervision of specialists.

Sunflower seeds are treated with a 65 percent moistened powder of Fentiuram. Two-three kg of this preparation are used per ton of seed with simultaneous water moistening (the norm being 10 liters per ton). For better chemical adherence to seeds, one liter of skimmed milk is added to the water, or 400 grams of silicate glue. Fentiuram protects the seeds in the soil from wireworms, therefore, treatment with hexachlorane is no longer needed. Chemically treated sunflower seed is kept in bags until sowing.

This innovation yields good results; crop susceptibility to rot has markedly decreased.

Because of high-quality accomplishment of the recommended measures, application of organic and mineral fertilizers, and reliable protection of plants from pests and diseases, rayon sunflower growers last year harvested 17.3 quintals of seed on each of 8,350 hectares, and 24.2 quintals on the sovkhoz imeni "Voroshilovgradskaya Pravda" (on 500 hectares).

This experience of the Kremins'koy rayon was taken as an example by other farm workers in the oblast. Because of wide application of the centralized seed treatment process and use of progressive sunflower raising technology, plant susceptibility to disease has been reduced to a minimum, and seed productivity has increased.

A pre-harvest crop desiccation was also helpful; it was done last year on 14,200 hectares.

9443
CSO: 1811

TILLING AND CROPPING TECHNOLOGY

SUGGESTIONS MADE FOR INCREASING SOYBEAN YIELDS

Kiev SIL'S'KI VISTI in Ukrainian 22 Feb 80 p 2

[Article by B. Hranat, chief agronomist, kolkhoz imeni Vatutin, Kirovogradskiy rayon, honored Ukr SSR agronomist; M. Ivanchenko, chief, soybean section, State Oblast Agricultural Research Station, I. Hutyra, candidate of economical sciences on: "Soybean Harvest Among the Diligent"]

[Text] One of the most promising ways to balance feed rations of animals in kolkhozes and sovkhozes is to increase soybean production. Soybeans contain 35-45 percent high-quality protein, 17-25 percent oil and other valuable substances.

This crop has been raised in the Kirovogradskaya oblast for a long time. Workers at the kolkhoz imeni Lenin in the Dolynskoy rayon are especially experienced, having increased the soybean harvest to 17 quintals/hectare during the 10th Five-Year Plan and having increased soybean field areas to 520 hectares. This kolkhoz has been approved as a basic research-model farm for the improvement of soybean raising technology.

This crop grows well also at the kolkhoz imeni Vatutin in the Kirovogradskiy rayon. Of course, success did not come immediately. Specialists studied carefully experiences of the Order of Lenin kolkhoz "Druzhba Narodiv" in the Krasnogvardeyskiy rayon, Krymskaya oblast, and other farms who exhibit their achievements at the Exhibition of USSR National Economic Achievements and at the Exhibition of Ukrainian SSR National Economic Achievements. A lot of help was provided to the Kirovograd rural workers by scientists from the State Oblast Agricultural Research Station.

Following scientists' advice, soybeans are sown here after winter wheat. Under fall plowing of winter fallow 50 tons of manure are applied per hectare, three quintals superphosphate and two quintals abraum sault. The field is levelled carefully. Prior to sowing herbicides are applied under the cultivation. Regionalized seed of the "Korovogradskaya-4" variety is sown at the end of April or in the beginning of May. A month prior to sowing it was treated with the TMTD preparation, and on the sowing day with nitragine.

The sowing norm is 400-450 thousand sprouting seeds per hectare, covering depth, depending on soil moisture, four-seven cm, between-row width 45 cm.

For maximal weed elimination, the sprouts are harrowed with light harrows across the rows and only in the daytime when plant turgor is lowered. As soon as the rows are marked, interrows are tilled with chisel-like working parts. At first [they are tilled] to a depth of 10-12 cm, the second time 7-8 cm, and a third time 5-6 cm. For working the soil within the rows weeding harrows are attached to the cultivator. Prior to ripening, plants are dried uncut using the Reglon preparation.

Harvesting is done with straight combining. Windrowers are set so that the cutting height should not exceed 5-6 cm. The turning speed of the combine threshing drum is lowered to 400-500 turns per minute. Cutting is done during dry weather, starting at 10-11 o'clock in the morning when the dew has completely evaporated.

Application of the experiences of kolkhoz imeni Lenin, Dolynskoy Rayon and imeni Vatutin, Korovogradskiy Rayon and other leading farms--members of the Exhibition of USSR National Economic Achievements and the Exhibition of Ukrainian SSR National Economic Achievements--should, of course, provide for a marked soybean production increase within the oblast. But what are the actual results? If at the seed kolkhoz imeni Lenin 1.7 quintals of soybeans are obtained from each hectare, then at the kolkhoz "Peremoha" in the Kirovogradskiy rayon, last year only 1.6 quintals were harvested. Administration head P.P. Shapovalov explains that supposedly soybeans do not grow well in dry years. But in the last five-year plan this crop was raised on a larger area with a fairly good harvest. However, in the following years smaller and smaller areas were allotted to it and the experience gained was lost.

The following is the story at kolkhoz "Zhovten'" in Znamyans'koy rayon. In the rayon agricultural administration it is listed as seed-producing. Therefore, it could have been expected that the cropping technology of this valuable crop had been thoroughly studied here and was being put into effect. However, it soon became apparent that the soil under soybeans had not been specially prepared either in the fall or in the spring. Soybeans were allocated to an area after sugar beets under which 100 tons of organic fertilizer per hectare were applied. They were counting on the after-effects of this application.

In the first phases of its development, soybeans withstand drought better than other agricultural crops, therefore, the plants developed normally. However, during flowering and particularly during pod formation, growth and filling the need for moisture increases sharply. At this point the negative effect of sugar beets (as a prodecessor) which dry out the soil became obvious. Soil and air dryness brought about intensive falling off of buds, flowers and pods and only slight seed filling. Two-phase harvest methods also led to seed loss; on each of 50 hectares only 1.2 quintals were harvested. This would not have happened if kolkhoz specialists and machine operators had learned the cropping technology, and had familiarized themselves with scientists' recommendations and progressive experience. They need not have gone far to obtain it. At the neighboring kolkhoz "Shlyakh Illicha" workers obtain abundant harvests.

Kolkhoz "Zhovten'" is not an exception in the Znamyans'kiy rayon. Lack of attention to the introduction of the new and progressive resulted that in general within the rayon only 3.9 quintals of soybeans per hectare were harvested.

What does the oblast agricultural administration have to say about it? They issued an order (dated 27 June 1978) in which, among other points, the following is stated: "To organize as at the kolkhoz imeni Lenin instruction for farm managers and specialists. To provide for the fulfillment of organizational-farming measures to introduce the experience of the basic research-model farm in all oblast kolkhozes."

However, these planned measures remained on paper only.

Increasing the yield of the soybean hectare is a problem which deserves more attention. The protein cattle-feed ration balance is inadequate on many of the oblast farms. Managers of oblast and rayon agricultural administrations must take this into consideration.

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HIGH WINTER WHEAT YIELDS EXPECTED IN POLTAVA

Moscow SEL'SKAYA ZHIZN' in Russian 5 Mar 80 p 2

[Article by V. Vantsak, chief of the Poltavskaya Oblast Agriculture Administration and Honored Scientist of the Ukrainian SSR, and V. Chuyko, director of the Poltavskaya Agricultural Experimental Station: "Winter Grain"]

[Text] Agricultural workers in the Poltava area have a special attitude toward winter wheat. This has been the case for a long time. And now it is true to an even greater degree. They value it first of all because it is high yielding and with good agricultural practices it has always justified the hopes of the grain growers.

Practice has shown that the fate of winter grains is frequently predetermined by the fall. In places where they prepared the soil for sowing haphazardly and where they obtained shoots which were too thin, late, and uneven, even after a good winter they frequently have to resow or "repair" the sown areas. There's no use in blaming the weather for this: it corrects, but does not determine the yield! It is entirely a matter of technology, timeliness, and the quality of field operations.

Let us turn to the practice of last year, an especially difficult and at the same time a most instructive year. It was distinguished not only by the complex conditions of wintering (frequent thaws, alternating with low temperatures), and also a severe drought in May and June when the crop was being formed.

Spring crops have proved to be in an exceptionally bad state; part of them died, the rest produced a very low yield. Winter wheat yielded an average of 27 quintals per hectare for the oblast; up to 30 or more quintals of grain were obtained on the average in Grebenkovskiy, Zen'kovskiy, and Kotelevskiy rayons. The Bil'shovyts'ka Pratsya Kolkhoz in Karlovskiy Rayon raised an average of 48.4 quintals of wheat grain per hectare; the sovkhoz of the Oktyabr'skiy Sugar Combine of this same rayon raised 48.5 quintals, while the teaching-experimental farm at the Poltavskiy Agricultural Institute harvested 45.3 quintals. The experimental farm of our station harvested 46.7 and the Kolkhoz imeni Ordzhonikidze in Shishatskiy Rayon, the Peremoga Komunizma Kolkhoz in Lokhvitskiy Rayon, and the Progress Kolkhoz in Karlovskiy Rayon raised 38 to 40 quintals.

How was this done? What is the basis for such indicators? We repeat again: know-how.

New methods of soil preparation have become firmly entrenched on the fields of Poltavskaya Oblast, and this guarantees success. Mouldboardless shallow cultivation of the fields after all precursors, and especially after late harvested precursors makes it possible to achieve better soil lossening and creates an upper mulching layer, thanks to which there is better moisture retention.

In our station's tests mouldboardless disked soil cultivation after the harvesting of peas for grain yielded an average multi-year increment to the winter wheat yield of 5 quintals per hectare and cultivation after corn for silage yielded 5.2 quintals per hectare more compared to the yield after plowing.

This promising method has been adopted by oblast grain growers and guarantees success on the winter field. Mouldboardless tilling has been practised for over 10 years on Bil'shovyts'ka Pratsya Kolkhoz in Karlovskiy Rayon. During these years the increment in winter wheat grain yield has totaled an average of 4.7 quintals on each hectare.

Here they do not forget about another very important factor -- the schedule for feeding the plants. Despite the fact that the kolkhoz land is very productive, the farm applies 14 to 15 tons of organic fertilizers and 7.3 quintals of mineral fertilizers per hectare of plowed land.

It is noteworthy that for 10 years now the kolkhoz has not once resown winter wheat (even though the years have been different), and its average yield during the Tenth Five-Year Plan totaled 50.4 quintals per hectare.

An analysis of the work of the above mentioned leading farms bears witness to the fact that they scrupulously adhere to the best periods for carrying out technological operations, and quality is regarded as of paramount importance.

The level of our skills and the material and technical base of agricultural production make it possible not just to place our hopes on this crop, but also to program and to purposefully direct the process of obtaining a harvest.

In this sense the oblast has made a very promising beginning. In 1978 scientific associates of the experimental station in cooperation with directors and specialists of the Progress Kolkhoz in Karlovskiy Rayon worked out a complex of measures which should guarantee a 65-quintal yield of winter wheat. A 100-hectare crop rotation area was selected for the experiment. Here annual grasses raised on occupied fallow was the precursor crop. The soil cover is deep, average-humic chernozem.

The methodology first of all provided for the determination of base data, that is, what the farm had achieved. It emerged that on the kolkhoz the annual increment in the wheat yield averaged 2 quintals during the previous 10 years. If the kolkhoz retained the existing technology, then a yield of 51 to 52 quintals per hectare could have been anticipated in 1979. But it was decided to increase the yield to 65 quintals. Hence, the necessary background for such an upsurge had to be created. First of all, plants had to be guaranteed nutrients. In this case there had clearly been a shortage of the accepted amounts of fertilizers. Taking into consideration what the soil had been saturated with, the agrochemists calculated that to achieve the planned level it was necessary to apply an average of 45 tons of organic fertilizers and 13 quintals of mineral fertilizers per hectare.

An increase in moisture provision is the second decisive element in the program. The planned yield required 455 millimeters of productive moisture. This requirement was satisfied thanks to reserves accumulated during the fall, spring-summer precipitation, and snow.

The Odesskaya-51 regionalized variety met the program's requirements, since it is responsive to fertilizers and uses moisture economically. Measures were also defined to protect plants from pests and diseases.

Naturally, farm specialists and scientific associates kept this area under special agronomical control. And here is the result: 63.8 quintals per hectare!

By the way, the raising of a programmed crop of sugar beets on this kolkhoz also guaranteed good results: an average of 612 quintals was actually obtained per hectare compared with the planned yield of 600 quintals of the root crop.

Relying on the results achieved, oblast kolkhozes and sovkhozes last fall worked an area of wheat considerably larger than planned.

To guarantee a high yield, the structure of precursor crops was reviewed on the eve of the sowing. The area sown to wheat was reduced on the stubble field and increased on occupied fallow and leguminous crop fields. As for the composition by variety, along with the Odesskaya-51, a large proportion of the area is occupied by Akhtyrchanka and Dneprovskaya-846, which produce an appreciable increment in grain under similar conditions.

Of course, there are many difficult stages ahead. What will the spring be like? What sort of summer will we have? All these are problems with many unknowns. But the agricultural workers in the Poltava area have a reason to expect new achievements on the winter field this year.

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TILLING AND CROPPING TECHNOLOGY

DEVELOPMENT OF NEW WHEAT VARIETY TRACED

Moscow SEL'SKAYA ZHIZN' in Russian 8 Mar 80 p 2

[Article by G. Karpenko, editor of Radyans'kiy Prapor, the Konotopskiy Rayon newspaper, Sumskaya Oblast: "Creators of the Grain Ears"]

[Text] An expansive, rich steppe of fertile chernozem spreads over the southern part of Akhtyrskiy Rayon, Sumskaya Oblast. The Ivanovskaya Experimental Selection Station is located here; its associates are conducting the painstaking work of enriching the grain field with new varieties and hybrids.

Selection expert Anna Savvishna Lastovich says, "This brought me here. At the Khar'kov Agricultural Institute I heard lectures by the famous selection expert Professor Vasiliy Yakovlevich Yur'yev. For 2 years I practiced wheat selection under the direction of Professor Andrey Frolovich Shulyndin. And immediately after graduating from the institute I headed the department for winter wheat selection and winter crop seed growing at our station."

Anna Savvishna does not mention how difficult the path that she has chosen is. The profession of selection expert has never been an easy one. The task of developing a new ear is given only to the most talented and patient, to those who possess not only experience, but also innate intuition, skill in seeing and channeling in the necessary direction the smallest changes taking place in plant life. The job of selection expert is especially complex today. You see, when A. S. Lastovich set about her work, such masterpieces of selection as Bezostaya-1 and Mironovskaya-808 had already become famous. But if you look closely, they have their "shortcomings." The first one does not cluster well enough, and it freezes in severe winters, while the other one lodges. Hundreds, many hundreds of samples and cross pollinations, thousands of numbers and hybrids cherished and cared for by hand and then ruthlessly rejected and cast aside as useless. In 20 years of work only 100 strains have been developed which proved more or less suitable for further work.

Only one day we were lucky. They sometimes say: if there's no good luck, even bad luck helps. In the winter of 1963, which was exceptionally dry for Sumskaya Oblast, only individual Bezostaya-1 plants remained in the experimental plots. Their meager yield was carefully harvested. Then hybrid combinations with Mironovskaya, long years of selection, and among the 100 strains that emerged only one pleased the young selection expert. Its ear turned out to be tight, thick-grained, and this gave promise of a high yield. From its parents it took early maturity, excellent winter hardiness, abundant tillering and resistance to all sorts of diseases such as leaf and stem rust. Years of careful, pitiless selection passed, and then the strain which had been developed really began to surpass its progenitors in yield on the experimental plots.

After 4 years of ecological testing at the stations of the Khar'kov Selection Center system (1971-1975) the yield of the new strain reached 60 to 70 quintals, exceeding the regionalized Mironovskaya-808 on the average of 8 quintals of grain per hectare. And then the strain, after being verified, was registered as a new variety under the name Akhtyrchanka.

During the years which have elapsed since then, Akhtyrchanka has convincingly proved its merit in state and production variety testing. Its yield exceeded that of regionalized varieties in Tul'skaya, Cherkasskaya, Poltavskaya, Khar'kovskaya, and several other oblasts.

In 1978 this variety occupied 4,967 hectares in Akhtyrskiy Rayon, Sumskaya Oblast, and yielded an average of 46 quintals of grain from each hectare.

For several years on the average Akhtyrchanka exceeded Mironovskaya-808 in yield by 5.5 quintals per hectare in Sumskaya Oblast; it is exceeding the regionalized variety Il'ichevka by 3.4 quintals in Cherkasskaya Oblast and Odesskaya-51 by 3.7 quintals in Poltavskaya Oblast. Seed growing is not yet successfully meeting the demand for it.

Anna Savvishna says, "The entire station collective helps in the work of developing new varieties. I consider junior scientific associate Viktoriya Mikhaylovna Bazhan and scientific associate of the All-Union Scientific Research Institute of Sugar Beets Nikolay Ignat'yevich Savchenko my co-authors. The success of Akhtyrchanka is our joint success."

The work of selection continues. A. S. Lastovich is currently conducting tests of the new varieties Ivanovskaya-12, Ivanovskaya-46, and Ivanovskaya-8. Many plans are connected with the creation of a new variety of spring wheat.

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TILLING AND CROPPING TECHNOLOGY

BRIEF

SHORT STALK WHEAT--Kherson. Selection experts at the Ukrainian Scientific Research Institute of Irrigated Agriculture are working hard to develop new varieties and hybrids of agricultural crops. Recently they completed the creation of two short stalk winter wheats -- Ostistaya-3 and Khersonskaya-552. Under testing at the institute these varieties yielded 85 to 90 quintals of high quality grain per hectare. Plants of these varieties do not lodge; this is very important under conditions of irrigation. The new varieties have been submitted for state testing. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 2 Apr 80 p 3] 7990

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SEED PROBLEMS IN VOLGOGRADSKAYA OBLAST DISCUSSED

Moscow PRAVDA in Russian 19 Feb 80 p 1

[Article by V. Goncharov, PRAVDA correspondent and V. Maksimov, department head of Editorial Board for VOLGOGRADSKAYA PRAVDA newspaper: "You Reap What You Sow"]

[Text] The snow which fell so generously in Volgogradskaya Oblast disrupted somewhat the usual work rhythm of the farmers. The grain growers are glancing more and more often at the calendar. Only a short amount of time remains before the commencement of sowing. The farmers in Volgogradskaya Oblast must plant grain crops on an area of almost 2.5 million hectares. The future harvest is greatly dependent upon the type of seed place in the soil.

"What will we use for sowing purposes? Such was the question we asked ourselves even prior to the harvest" related the director of the Dinamo Sovkhoz in Nekhayevskiy Rayon, V. Anikin, "at the time, we selected the best tracts from which to take the wheat and barley "for breeding purposes."

Outstanding seed is available at the kolkhozes imeni Komintern and Krasnoye Znamya in Yelanskiy Rayon, at the Kolkhoz imeni K. Marks in Kikvidzenskiy Rayon and at the sovkhozes Kolobovskiy and Parizhskaya Kommun in Leninskiy and Staropoltavskiy rayons respectively.

"The majority of the oblast's kolkhozes and sovkhozes have procured regionalized high quality seed for their spring crops" stated a department chief of the agricultural administration of the oblast executive committee, I. Varakuta, "there are more than 509,000 tons of such seed in the storehouses. And 99.9 percent of this amount is quality-standardized. Many have achieved high indices as a result of additional processing of the grain.

For example, let us take the Sebryakovskiy Sovkhoz in Mikhaylovskiy Rayon. Initially the specialists classified 10,000 quintals of barley as being of 2d class quality. Subsequently the barley was subjected to additional processing, until finally it was raised to the best condition.

However, by no means has good seed been prepared in all areas. At the Plamya Revolyutsii and Lebyazh'ya Polyana sovkhozes in Sredneakhtubinskiy Rayon, large batches of wheat and barley became badly contaminated. The task of purifying the batches and raising their quality constituted no great difficulty since the required equipment was available. Nevertheless, this important work was left, as the saying goes, "until later."

Here the kolkhoz and sovkhoz leaders and specialists were primarily at fault. At the same time, the workers attached to agricultural organs view this type of neglect with detached interest. The farmers in Kotel'nikovskiy and Podtelkovskiy rayons have seed supplies which include less than 50 percent of their own seed. Meanwhile, strong reserve supplies of seed have been created in Kalachevskiy, Novoanninskiy and Mikhaylovskiy rayons. The solution is obvious. The exchange of grain must be accelerated.

Large tracts are still being sown throughout the oblast using varieties which are not the most productive, varieties which produce grain of low-grade quality.

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PRE-SOWING PREPARATIONS IN LATVIAN SSR DISCUSSED

Riga SOVETSKAYA LATVIYA in Russian 9 Feb 80 p 1

[Article by V. Alekseyev, deputy chief of Main Administration of Farming of the Ministry of Agriculture for the Latvian SSR: "In Preparation for Spring"]

[Text] Compared to last year, when the republic's farmers, owing to unfavorable weather conditions, had to carry out a large volume of plowing work and other agrotechnical measures during the spring period, the situation this year is entirely different. The soil for the spring crops was plowed in the autumn. The sowing plan for the winter crops was carried out completely and these crops occupy almost 276,000 hectares. An inspection has revealed that the winter crops are in fine condition at the present time. All of the kolkhozes and sovkhozes have the required amounts of seed at their disposal.

Thus, during this final year of the five-year plan, the spring sowing can be carried out rapidly and this will provide a reliable guarantee for obtaining high yields for the grain, potato, beet and forage crops.

Prior to the commencement of the sowing period, the seed and planting stock must be fully prepared and improved to high planting conditions. However, some farms are proceeding all too slowly in carrying out this work. Prior to the 1st of February, 71 percent of the grain crop seed in the republic was quality-standardized and at kolkhozes and sovkhozes in Ludzenskiy, Madonskiy, Balvskiy rayons -- 40-46 percent. Great importance is being attached to the seed of perennial grasses and yet only 62.5 percent of such seed is quality-standardized. An urgent requirement exists for carrying out the chemical disinfection of seed in all areas and for organizing an interfarm and interrayon exchange of seed.

Prior to this current spring period, the farms had laid away sufficient amounts of potatoes -- at the rate of approximately 6 tons per hectare. The main task at the present time consists of protecting the seed tubers. This requires that the clamps be checked and that sorting work be organized in the storehouses. The potatoes must not be allowed to spoil.

As is well known, organic fertilizers play an important role in the campaign to achieve high yields. We possess the equipment and machine operator personnel required for carrying out this work in a more intensive manner. By 1 February, the quarterly plan for delivering organic fertilizer had been fulfilled throughout the republic by 43 percent, in Ventspilsskiy Rayon -- by 62 percent and in Kuldigskiy and Saldusskiy rayons -- by 52-58 percent. No delays can be tolerated in the movement of fertilizer out onto the fields. Indeed, it is impossible to go out onto the farms during the second half of March. Top dressings should be applied to the winter crops during the best periods and this involves a large volume of work.

The equipment repair work is proceeding at a maximum tempo. The schedule for repair work is being adhered to. The machine operators are undertaking every possible measure in the interest of ensuring that all machines perform in a faultless manner during the sowing period.

Zonal conferences are being held this month throughout the republic for farm leaders and specialists and workers attached to agricultural administrations and reports and election meetings and also production meetings are being conducted at kolkhozes and sovkhozes. In analyzing the status of affairs on the farms, special emphasis is being placed upon the preparations being made for spring. In addition to agrotechnical measures, special attention must be given here to personnel training and to organizing the sowing work.

This year the task consists of obtaining high yields for all of our agricultural crops. We are enjoined to do this by the recently adopted decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Additional Measures for Preparing for and Carrying out Spring Field Operations During 1980."

7026
CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

FIELD MOISTURE CONDITIONS IN LATVIAN SSR REVIEWED

Riga SOVETSKAYA LATVIYA in Russian 15 Mar 80 p 2

[Article by L. Borisovskaya, agricultural meteorologist: "Weather and Crops"]

[Text] The month of March is at hand. The time is approaching when the winter crops will emerge from the dormancy stage. On the basis of data accumulated over a period of many years, this should take place in the middle of April.

Cold weather marked by snowstorms and an abundance of snow prevailed during February. The height of the snow cover increased to 30-40 centimeters and on the Vidzemskaya and Aluksnenskaya elevations -- to 50-60 centimeters, or 2-3 times in excess of the norm. The snow cover reliably protects the winter crops against freezing, but if the depth of the frozen soil is shallow the plants may perish beneath the snow.

Such conditions have appeared in many rayons and mainly in the eastern rayons where the duration of a deep snow cover is two and a half months and the depth of the frozen soil is shallow. Here the minimal soil temperature at the tillering depth (3 centimeters) ranges from 0 to -4 degrees.

At the end of February and in early March, inspections were carried out on the condition of the winter crops on an area of approximately 23,000 hectares. They revealed that the plants endured the winter in a satisfactory manner and that no extensive plant loss occurred. Nevertheless, an increase did take place in the overall area of sparse plantings. A raised degree of sparse plantings was observed in the case of 13 percent of the winter rye inspected and for winter wheat -- 19 percent. Last year at this time the figures were 36 and 42 percent respectively.

During the first 10 days of March, the snow cover out on the fields did not change substantially, the depth of the frozen soil decreased somewhat and on 10 March, in a majority of rayons, it amounted to 20-40 centimeters in the northern and 50-70 centimeters in the southeastern rayons.

It is expected that water will stagnate out on the fields during the spring period. This usually leads to an increase in sparse plantings as a result of drenching. This is why thaw waters must be removed from the fields. The thawing of a large amount of snow usually increases the intrasoil runoff of water and this leads to a washing out of the mineral nutrients. Under such conditions, a spring top dressing for the winter crops should ideally be provided in two applications.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

MASS SOWING OF CORN--Chimkent, 5 Apr--Following an abundant amount of precipitation, the sowing units have been moved out onto the feed fields of southern Kazakhstan, which have not been warmed by the spring sun. The oblast's sovkhozes and kolkhozes were the first in the republic to commence the mass sowing of corn. It will be planted on 1,000 hectares on the bottom land of the Syr Dar'ya River and in the Turkestan Steppe. This year the mechanized detachments have vowed to obtain 400 quintals of fodder per hectare -- almost 100 quintals more than the plan. This will make it possible to place approximately 100,000 additional tons of silage in the trenches. In response to the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Additional Measures for Increasing the Production of Coarse and Succulent Feed in 1980 and Raising Its Quality," the oblast's farmers are expanding their companion sowings of forage crops by five times compared to last year. Perennial grasses or fodder beets are being sown in a mixture with corn and with alfalfa -- Sudan grass, which increases the hay yield by twofold. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 6 Apr 80 p 1] 7026

NEW STRONG WHEAT VARIETIES--Kokchetav--The Tselinnaya-21 and Omskaya-9 new strong wheat varieties will furnish a substantial increase in yields. This year, they are being regionalized on farms throughout the oblast. State tests have shown that both varieties surpass, in terms of cropping power, the extensively used Saratovskaya-29 wheat by an average of 2-4 quintals of grain per hectare. The new varieties are resistant against drought conditions, diseases and pests. The Stepnoishimskaya and Ruzayevka experimental stations have shipped large batches of the Tselinnaya-21 and Omskaya-9 seed to sovkhozes and kolkhozes throughout the oblast. [Text] [Moscow GUDOK in Russian 4 Apr 80 p 1] 7026

INCREASE IN FEED PRODUCTION--Dushanbe--This year the farms of Tadzhikistan have resolved to increase their feed production by one fourth. The principal increase in forage will be provided by alfalfa, the areas of which will be increased by 36,000 hectares. The kolkhozes and sovkhozes in the piedmont rayons have commenced the mass sowing of this crop. Alfalfa is being sown throughout the republic in a mixture with corn, sorghum and other crops. As a result, the quantity of feed being obtained from each hectare will double during the same year in which it is sown. [Text] [Moscow GUDOK in Russian 4 Apr 80 p 1] 7026

KIRGIZ SSR COTTON PLAN--Osh, 5 Apr--The farmers of Kirgizia, who have commenced their sowing operations, are planting their cotton seed on the basis of scientifically sound plans. This will ensure an optimum plant density on each "elevel" of the country's highest altitude plantations. Combined with the extensive use of denuded seed having a raised germinative capacity, this technology is making it possible to make up for the time lost owing to poor weather. During the final year of the five-year plan, the republic's farmers have vowed to supply the homeland with 210,000 tons of cotton. An increase in cropping power will be achieved by further improving the culture of farming and by introducing highly productive varieties into operations on an extensive scale, varieties which furnish up to 60 quintals of raw cotton per hectare. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 6 Apr 80 p 1] 7026

UZBEKISTAN COTTON PRODUCTION--The irrigated lands of Central Asia represent a tremendous resource of the country. It is a unique region in which an extremely valuable agricultural crop is grown, a crop which ranks in importance with metal, fuel and grain insofar as the country's economy is concerned. In 1979, a record amount of cotton was harvested in the USSR -- 9.16 million tons of raw cotton, including 5.76 million tons in Uzbekistan. This year the plans call for an even greater amount to be produced. In the process, special attention is to be given to improving the quality of the output and increasing the deliveries of fine-fibred varieties of cotton. The intensive cotton-alfalfa crop rotation plans developed by the republic's scientists and specialists are making it possible to solve this task successfully. In the recent greeting extended by Comrade L.I. Brezhnev to the agricultural workers in Tashkentskaya Oblast, emphasis was placed upon the fact that the country's rice growing regions offer tremendous reserves for the development of livestock breeding. [Text] [Moscow IZVESTIYA in Russian 15 May 80 p 2] 7026

TURKMEN SSR SOWING OPERATIONS--Turkmen SSR--It has been some time since such a late spring was recorded in the Turkmen SSR. Cold weather has delayed by almost 1 month the planting of vegetable seedlings in the open ground and the sowing of cotton and other spring crops must now be carried out at the same time. In the situation that now prevails, special importance is attached to ensuring that efficient work is performed by all teams engaged in carrying out the spring field work and that all human and equipment resources are maneuvered in a skilful and efficient manner. And the farmers on a majority of the republic's farms are successfully coping with this task. The workers in the southern oblasts were the first to commence their sowing campaign. The vegetable growers in Gyaurskiy, Ashkhabadskiy and Geok-Tepinskiy rayons have reported that they have completed their planting of early vegetables on the planned areas. The front of the sowing work being carried out on the principal fields of the Turkmen SSR -- the cotton fields -- is expanding with each passing day. The republic's agricultural workers, having established their urgent Leninist watch and by way of solving the tasks assigned by the July (1978) Plenum of the CPSU Central committee, have promised to increase their gross output volume this year by 5.5 percent and to produce no less than 1.21 million tons of raw cotton (including 240,000 tons consisting of fibre of the highest purity), 340,000 tons of grain, 440,000 tons of vegetables and melons and large quantities of fruit and grapes. [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 6 Apr 80 p 1] 7026

AZERBAIJAN COTTON SOWING--Baku, 5 Apr--The farmers of Azerbakjan have commenced their mass sowing of cotton. The cotton growers in the Muganskaya, Mil'skaya, Karabakhskaya and Shirvanskaya steppe regions have moved hundreds of sowing units out onto the fields. The sowing is being carried out using 1st class seed from the new regionalized 3038 and 3312 varieties of cotton, developed by the Azerbaijan plant breeders. They are completely replacing the variety which has been in use up until this time, since they surpass it in terms of both cropping power and fibre yield. Mineral fertilizers and herbicides are being applied simultaneously with placing the seed in the soil. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 6 Apr 80 p 1] 7026

CORN SOWING COMMENCES--Baku--Immediately following their alfalfa and fodder root crops, the farmers of Azerbaijan commenced sowing corn, which this year will be grown on 100,000 hectares. The corn is being sown by teams which have been created in all of the steppe and piedmont rayons in accordance with the Ipatovo method. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 11 Apr 80 p 1] 7026

AGRICULTURAL AVIATION--Groznyy--More than 10,000 hectares of winter crops have been treated since the beginning of the year by crews attached to Groznyy agricultural aviation. The aircraft are flying today in the skies over Dagestan, the North Ossetian ASSR and the Kabardino-Balkarsk ASSR. Overall, the pilots of the Checheno-Ingush ASSR will furnish assistance to the grain growers this year in the form of treating approximately 1 million hectares of land in the north Caucasus and Central Asia. [Text] [Moscow IZVESTIYA in Russian 15 Feb 80 p 1] 7026

ORGANIC FERTILIZATION OF FIELDS--Yoshkar-Ola--A fertility detachment at the Za Mir Sovkhoz has over-fulfilled by more than three times its task for moving organic fertilizers out onto the fields. In all, more than 3.5 million tons of compost -- one and a half times more than last year -- were supplied to the fields in the Mari ASSR during the autumn and winter period. [Text] [Moscow GUDOK in Russian 18 Mar 80 p 1] 7026

TWO CORN HARVESTS--Termez--Green rows of seedlings have appeared on the corn fields of the virgin land Sovkhoz imeni Khamid Alimdzhan. The early sowing will make it possible to obtain the first harvest here in June and thereafter the seed for a second harvest of corn for silage can be placed in the soil. This year the sowing of this crop in Surkhandar'inskaya Oblast is being expanded by almost one and a half times, with the plans calling for a majority of the fields to be used for grain purposes. Combined sowings of corn and fodder beets have been employed on an extensive scale. [Text] [Moscow GUDOK in Russian 18 Mar 80 p 1] 7026

ORGANIC FERTILIZER APPLICATIONS--Stavropol'--The Stavropol' machine operators have already moved approximately 8 million tons of organic fertilizer out onto the fields in behalf of this year's harvest. Based upon its nitrogen and phosphorus content, this is equivalent to 20 freight cars filled with industrially produced granules. The kolkhozes and sovkhozes in Izobil'nenskiy, Kochubeyevskiy and Predgornyy rayons were the first in the kray to fulfill the task established for the winter and spring period -- apply a top dressing of fertilizer to the arable land. At the moment, the prolonged period of cold weather is preventing the farmers from sowing their spring crops and thus the decision has been made to move more than 1 million tons of additional organic fertilizer out onto the fields. [Text] [Moscow GUDOK in Russian 18 Mar 80 p 1] 7026

HYBRID CORN SEED PRODUCTION--Alma-Ata--Kazakhstan has become a large producer of hybrid corn seed, having increased its harvest of such seed by more than one and a half times during the years of the five-year plan. The last consignments bearing the stamp "For Spring Fields" have been shipped from its grading and drying plants to farms in Belorussia, Armenia and the republics of Central Asia. Approximately 4,000 tons of high quality seed were shipped. The conversion of the branch over to an industrial basis aided the republic's farmers with regard to raising the gross yield of seed. [Text] [Moscow GUDOK in Russian 18 Mar 80 p 1] 7026

MOISTURE RETENTION WORK--Belgorod--To retain as much of the thaw moisture as possible out on the fields. The oblast's farmers, who have commenced the mass ridging of snow crosswise to the slopes, are presently engaged in solving this task. Hundreds of units are being used for this work. The plans call for thaw water to be retained on hundreds of thousands of hectares. [Text] [Moscow GUDOK in Russian 18 Mar 80 p 1] 7026

VINEYARD PREPARATION--ODESSA--The vineyards in the northern Black Sea region endured the winter very well. Such was the conclusion drawn by specialists following an inspection of fruit-producing plantations, an area of approximately 80,000 hectares. Taking advantage of the fine weather, hundreds of teams and brigades moved out into the vineyards. They have commenced pruning and shaping the bushes, installing trellises and procuring cuttings. [Text] [Moscow GUDOK in Russian 18 Mar 80 p 1] 7026

SOWING OF ALFALFA--Baku--The machine operators in Sabirabadskiy Rayon in Azerbaijan have moved hundreds of sowing units out onto the fields. Alfalfa seed is being planted in the soil. This crop is being used extensively in crop rotation plans as a predecessor crop for cotton plantings. [Text] [Moscow IZVESTIYA in Russian 19 Feb 80 p 1] 7026

SPRING SOWING PREPARATIONS--Rostov-na-Donu--The machine operators in the oblast's largest grain growing rayon, Sal'skiy Rayon, have moved all of their soil cultivation and sowing equipment up to the very edge of the spring fields. Their goal -- with the onset of good weather, to carry out their sowing operations in just 30 hours. All of the necessary measures have been taken in this regard. The equipment underwent an additional inspection. Equipment movement routes were developed in all areas.

Approximately 300 sowing units have been staffed with sufficient personnel for double shift operations. During the final year of the five-year plan, the rayon's workers will produce no less than 500,000 tons of select grain. [Text] [Moscow GUDOK in Russian 11 Mar 80 p 1] 7026

SKILLED MACHINE OPERATORS REQUIRED--Kurganskaya Oblast--The fields in the trans-Urals region are still covered with snow. However, motor vehicle trains are beginning to appear more frequently on the highways -- they are delivering shiny new and freshly painted tractors, sowing machines and cultivators to the farms. The time is not far off when the machines will be moved out onto the fields. The fate of the future harvest is greatly dependent upon the individuals who will operate these machines. The party, soviet and economic organs must make more extensive use of the experience of leading farms. During the final year of the five-year plan, the Kurgan grain growers have vowed to sell 1.79 million tons of grain to the state. This is not an easy task. And it can be carried out successfully only if each kolkhoz and sovkhoz is supplied with skilled cadres of machine operators. [Text] [Moscow PRAVDA in Russian 25 Feb 80 p 2] 7026

PLANNED HARVEST YIELDS--"Competing in honor of the 110th anniversary of the birth of V.I. Lenin, the machine operators in our brigade completed their work of repairing equipment for the spring field operations. The decision has been made to sow the early grain crops in just 2 days and obtain 35 quintals of grain per hectare, sugar beets -- 270 quintals and sunflowers -- 21 quintals." -- I. Domnich (brigade leader of a tractor brigade at the Kolkhoz imeni Lenin and holder of two Orders of Lenin, Krasnogradskiy Rayon, Khar'kovskaya Oblast). During this spring period, the Editorial Board is receiving many such reports from kolkhozes and sovkhozes. The farmers, in carrying out the decisions handed down during the November 1979 Plenum of the CPSU Central Committee, are devoting a great amount of effort towards ensuring that the spring field work is carried out during the best periods and in a high quality manner, thus establishing a good foundation for the future harvest. In the southern regions of Kazakhstan, Kirghizia, Tadzhikistan and Turkmenistan, the spring grain crops are already being sown and potatoes planted. Field work is in progress in the southern part of the Russian Federation: the farmers are applying top dressings to their winter crops and carrying out harrowing work. The farms in the central and northern regions of the country have many concerns at the present time -- the preparation of seed and the sowing and soil cultivation equipment continues here. [Text] [Moscow TRUD in Russian 14 Mar 80 p 1] 7026

SELECTIVE TOP DRESSINGS--Tambov--The oblast's machine operators have commenced applying a selective top dressing to their winter wheat and rye. This year the oblast's winter crops were planted on an area unprecedented in size -- 580,000 hectares. According to an evaluation by specialists, the plants endured the winter very well. [Text] [Moscow GUDOK in Russian 18 Mar 80 p 1] 7026

CSO: 1824

STATUS OF EQUIPMENT SUPPLY,REPAIR IN LIVESTOCK FARMS

Moscow SEL'SKAYA ZHIZN' in Russian 8 Feb 80 p 2

[Article by A. Zholobov, Ryazanskaya Oblast: "If There is an Accident at the Complex"]

[Text] Production-technical services of poultry factories and large farms require radical improvements.

There was an accident at the broiler factory--the electrical motor in the boiler broke down. There was no spare motor. The poultry workers tried to find one somewhere in the oblast, to no avail.

In the local rayon sel'khoztekhnika [Agricultural equipment association] they were told directly: "Don't count on our bases. Not only do we not stock electrical motors for boiler houses, we don't even have simple couplings. Please turn to the oblast office of Gossnab." Here workers were given advice to seek the required electrical motor in other organizations. Two weeks later the suppliers of the poultry factory find one with great difficulty somewhere in the Urals. All of this time the boiler room operated at half its capacity without providing the required heating for the poultry house. As a result weight gain dropped and a plague began to take the chicks.

A similar thing occurred at another enterprise in Ryazan', the Iskra Hog-Raising Complex. Here right before the onset of cold weather the electrical motor of the boiler room's smoke pump broke down. A special winding wire was required. No matter where they turned, whether to the oblast sel'khoztekhnika or Gossnab, they were refused.

It should be noted that the problem of material-technical supplies for poultry factories and livestock complexes is not a local one.

"It involves the entire branch," says the director of the mechanization administration of RSFSR Svinprom [Hog-Raising Association], Yu. M. Revyakin. "In our republic alone there are now 283 hog-raising complexes in operation with a capacity of 1,200 to 12,000 tons of products annually. Over a period of 7 years the enterprises of Svinprom have almost doubled meat production."

Such changes have occurred in other republics. In the country in general, reported Glavzhivprom USSR [Main Administration of the Livestock Industry], 14 percent of total pork and beef produced by the branch and one third of the profits from sales come from state livestock complexes.

However, the return on capital investments and the increase in meat could be more significant if all of the almost 1,000 complexes within the system of Glavzhivprom, on which almost 2 billion rubles were spent, were operating at capacity. This has not yet been achieved. One of the reasons for this is the shortage of material-technical supplies. It turns out that enterprises built facilities and equipped them with modern equipment, but did not worry about operating conditions.

What are modern meat enterprises like? Let us again use the Iskra complex near Ryazan' as an example. It is supposed to fatten 108,000 hogs and supply the state with 11,000-12,000 tons of meat annually. This large, highly-mechanized enterprise has thousands of units of various machines, equipment and means of automation. A hundred kilometers of water and heat line networks have been installed, as well as 16 kilometers of feed-distribution lines. In the shops, 1,500 fans and over 2,000 electrical motors have been installed. There is a great deal of other equipment, but it is operating in conditions that are far from ideal.

Of course, we cannot do without a solid repair-operation service here. The complex has shops for the repair of electrical motors, start-regulating apparatuses and control-measuring equipment where experienced personnel is employed. This service is responsible for work related to operating the equipment, for technical checks of equipment and for its repair.

In addition to this service the oblast sel'khoztekhnika is attempting to create a second--a specialized department for technical services to complexes and poultry factories. But there is no one to deal with bringing order to the system of supplying them with repair-operations materials, spare parts and units.

Practical experience shows that there are many components and networks of mechanisms and equipment that wear out more quickly than normal. Thus, the feed conduits of the small ring serve for no longer than 2-3 years; pumps, bearings and V-belts in the ventilation and feed-distribution systems last 1 year. During this time every tenth electrical motor breaks down. Every other year it is necessary to change the entire soft cable in the feed distributors, some of the feed conduits and air channels.

However, no one but the livestock farmers have taken this into account. In supply organizations poultry factories and complexes are treated as stepchildren. They do not receive what they need for the repair-operations services, and for the precise operation of the meat conveyor. Judging by the information that was given to Glavzhivprom USSR, the orders that are placed by complexes for pipes and metal are filled by only 12 percent. Some materials are not issued at all, such as varnish-paint products, various cables, winding wire, lock accessories, auxiliary equipment for boiler rooms, pumps of all types, removable parts for the operations safety apparatuses, control-measuring equipment and automatic equipment.

Enterprises age, naturally, and mechanisms and equipment wear out. The need for spare parts and repair materials increases. Some complexes have been in operation for 6-7 years, yet there has not been a noticeable improvement in technical services. There really can be no changes as long as Gosplan USSR does not serious consider their requests and continues to program the supply of repair materials in lesser volumes and assortments than necessary.

Union ministries of agriculture and the State Committee of Sel'khoztekhnika have developed and presented to the agricultural department of USSR Gosplan new, scientifically based norms by which orders for material-technical supplies for enterprises of the meat industry must be formulated. All data is first studied, corrected with a consideration of the experience of operating complexes and the recommendations of scientific organizations and then coordinated with the republic's planning organs.

But USSR Gosplan, which previously had insisted on the necessity to develop such norms, has suddenly become opposed to them. References are made to the fact that the volume of deliveries of spare parts and materials for livestock raising enterprises should be determined not on the basis of actual need but on that of the average per 1,000,000 rubles of all fixed agricultural capital.

"We should not be directed by such average norms," says the director of the division of mechanization and electrification of USSR Glavzhivprom, A. P. Sindeyev. "They are convenient for calculations but not for actual operations. Complexes comprise a small proportion of the total volume of fixed agricultural capital--3-4 percent--although they are large producers of products. Consequently, for this insignificant portion of fixed capital they will be allocated an insignificant share of spare parts and materials for repair and operational needs. This will not solve the problem."

Now let us turn to the assortment of spare parts. Many spare parts are required--there are up to 45,000 parts for machines and equipment produced by the enterprises of many ministries and departments to provide technical supplies for poultry factories, livestock complexes and farms. There is a nomenclature list and orders are filled for only one-third of these. Such documentation is absent for the rest of the parts, especially for pump, boiler and compressor installations and for control-measuring equipment. Because of this complications arise when orders are formulated and defended, and when controls over their fulfillment are instituted.

Consideration should also be given to how best to organize the repair service and to efficiently utilize spare parts. Most specialists and practicians do not feel it is expedient to create special Goskomsel'khoztekhnia divisions for technical services through complexes, to have cadres of repair workers and repair shops change hands, as has been done in some oblasts. It is best to retain them in complexes where they are. In such instances the repair service, which is directly subordinate to the directors and specialists of the enterprise, together with all livestock farmers has the responsibility for production and production output.

The creation of a dependable technical service will enable the meat conveyor to operate without interruption.

8228
CSO: 1824

REGIONAL DEVELOPMENT

SOUTHERN BRANCH OF VASKHNIL MAKES RECOMMENDATIONS

Kiev SIL'S'KI VISTI in Ukrainian 6 Mar 80 p 2

[Article by V. Kalyta on: "Working the Soil, Scientist and Farmer"; report on annual VASKHNIL meetings, Southern Branch]

> [Text] As noted at the November (1979) Plenum of the CC CPSU by the CC CPSU General Secretary, Supreme Soviet Presidium Chairman Comrade L.I. Brezhnev, in solving actual problems facing the national economy particularly at the threshhold of the 11th Five-Year Plan, the party counts on active scientific help. One of the important areas of scientific application is agricultural production. The general annual meeting of the Southern Branch of VASKHNIL [All-Union Academy of Agricultural Sciences USSR] was devoted to an analysis of accomplishments the goals of Ukrainian and Moldavian scientific organizations in the light of the November (1979) CC CPSU Plenum and the December (1979) CC of the Ukrainian Communist Party Plenum.

The extent of research conducted by our scientists is wide. The main investigative directions are development of measures towards further agricultural and livestock-raising intensification; raising soil fertility; cultivation of new, more productive varieties and hybrids; improvement of cropping technology; problems in raising cattle productivity; extension of specialization and production concentration on the basis of interfarm cooperative and agro-industrial integration; ways of increasing the effectiveness of the machine-tractor yard; etc.

The returns are noticeable. The republic's farms accepted 180 scientific plans to be put into effect with an economic result of above 660 million karb.

Assistance by the republic's plant breeding centers is especially noteworthy. Last year they delivered to the state strain-testing stations 103 new grain varieties, grain hybrids, industrial, oil and feed crops, 35 of which were regionalized. Nineteen new varieties of fruit-berry crops are being tried and four grapes. Seven lines of agricultural animals and five poultry lines have been bred and prepared for approval.

Farmers rated highly new winter wheat varieties such as "Myronivs'ka-25," "Odes'ka napivkarlykova," "Kharkivs'ka-81," spring barley "Odes'kyy-82," alfalfa "Rayduha," "Yuzhanka" and a number of others. The new wheat varieties are noted for their high biological potential, calculated at 85-90 quintals of grain per hectare, spring barley 70-75 quintals and alfalfa 6-8 quintals of seed per hectare.

Rural workers are quite familiar with the fruitful activity of the collective from the Myronivs'kyy Scientific Research Institute on Selection and Wheat Seed Production, the All-Union Selection-Genetic Scientific-Research Institutes: Livestock Raising in the Forest Steppe and Woodland Areas, and Irrigated Agriculture. In recent years the Poltava Scientific Research Institute has improved its work breeding a new variety of Poltava meat hog whose numbers are growing rapidly on pedigree cattle raising farms in Poltavskaya, Khersonskaya, Chernovitskaya and a number of other oblasts. This young stock reaches 100 kg of live weight in 185 days, the average daily increase during fattening amounts to 700 grams with feed expenditures of 3.7 quintals of feed units per quintal of weight growth.

A lot of work has been done in the development and production review of the effectiveness of systems and methods of soil cultivation in the various zones of the republic. The possibility of decreasing the extent of deep plowing in crop rotation has been proved as well as the expedience of substituting plowing in some cases with surface tilling. This is one of the effective methods for more complete utilization of soil moisture, which also decreases work and cost expenditures in area preparation.

In combatting water and wind erosion the development of the soil preservation system of soil cultivation, practiced on an area of over 3 million hectares, has achieved great importance. It was estimated that by introducing this system along with other anti-erosion measures farms would be able to harvest additionally almost two million tons of grain.

The scientific potential in feed production increased markedly. Methods were developed to establish highly-productive hayfields and pastures, providing high-quality grass stands on low-productivity lands in one to two years, increasing meadow and pasture land productivity 4-6 times.

Scientific organizations dealing with livestock raising have also made important contributions. In the dairy cattle breeding branch, in addition to important pedigree work, new progressive milk production technologies are being developed and put into effect. Scientific collectives together with agricultural specialists participated actively in the introduction and improvement of line production sections on dairy product farms, approved by the CC CPSU. A series of effective replacements of milk for calves were proposed as well as mixed feed for young stock, methods of obtaining a protein vitamin concentrate from green plant juice, etc.

But production inquiries are continuously on the rise. This places also higher demands upon the scientific collectives. Noting work achievements, the speaker, chairman of the Southern Branch of VASKHNIL Academician H.O. Bohdanov and those comrades who took part in the discussion problems and goals which still face scientific collectives.

One of the most important goals remains the increase of grain production. Much needs to be accomplished, especially by plant breeders. The concern is not only for increasing new variety and hybrid productivity, but also improving their quality indices. More goal-directed work is needed in breeding hardier varieties of winter wheat, rye, short-stemmed barley, early-ripening corn hybrids and also feed crops, grain-pulse crops, buckwheat, which would meet the demands of intensive farming.

Scientists should assist the rural workers more actively in increasing sugar beet, sunflower and other crop production, and in the introduction of industrial technology in corn raising, which not only provides for great possibilities of a gross grain-harvest increase but also will markedly reduce labor losses.

Serious talk was held about the problems of further livestock-raising development. Specifically, it dealt with increasing numbers of livestock, especially cows, and improving herd renewal.

Great potential in the further growth of this branch is to be found in the intensification of feed production. First in consideration should be quality indices, especially the protein problem. Fulfillment of measures developed by scientists and specialists to increase the production of feed protein, approved by the CC of the Ukrainian Communist Party and the Council of Ministers of the Ukr SSR, permitted its slight increase in feed. But not all possibilities have been utilized in this respect. Further improvement lies in the extension of the soybean sowing area, peas, lupine, perennial grasses with a simultaneous increase in their productivity. In this kilkhozes and sovkhozes will benefit from new scientific recommendations on the structure improvement of feed crop sowing, their cropping and seed production technology. Scientists should also concern themselves with the improvement of meadows and pastures, repeated and intermediate sowing, research connected with changing feed production to an industrial basis, the effectiveness of which is underscored by the Kiev and Vinnitsa area experience. Rural workers expect from scientists both an improvement in procurement technology, feed harvesting and also promising recommendations on sharply cutting back nutrient loss in them. More active assistance is also needed in the accumulation of seed production for feed purposes.

Along with increasing the number of cattle, increased productivity remains an important goal. Success ingredients in this important matter are sufficient feed plus suitably organized pedigree work. Science has to help in creating highly productive herds adjusted to industrial technology conditions, utilize more fully through evaluation an effective method of pedigree work such as the use of breeding areas, checked with respect to offspring quality. In hog breeding a three-type crossbreeding should be encouraged.

Thus, scientific planning at the institute or research station is only one half of the issue. It is important to bring it to a logical conclusion, application and final result. Scientific collectives working on the basis of agreements on creative cooperation with kolkhozes and sovkhozes regulating the commitments of each, have the right approach.

A lot could be gained also from a more clear-cut coordination of agricultural scientific organizations with institutes at the Ukrainian Academy of Sciences, which offer many possibilities in developing fundamental theoretical problems.

Meeting resolutions were prepared on the basis of thoughtful exchange and scientific recommendations, specifying concrete ways to further increase research effectiveness and strengthening the ties between science and production.

Meeting participants included: Politburo member, Central Committee Secretary of the Ukrainian Communist Party M.M. Borysenko, Deputy USSR Minister of Agriculture, doctor of agricultural sciences V.S. Shevelukha, Vice-president of the Ukrainian Academy of Sciences K.M. Sytnyk, chief of scientific department of the Moldavian SSR Ministry of Agriculture S. Ye. Kylymar, Academician-secretary of the livestock-raising section VASKHNIL O.P. Kalashnykov, supervisors of various scientific organizations, leading scientists, and agricultural workers.

The following participated in the work of the annual meeting: deputy chairman of the Ukr SSR Council of Ministers I.D. Stepanenko, chief of the agricultural section of the Ukrainian Communist Party Central Committee A.D. Kovalenko, ministers, responsible workers of the CC of the Ukrainian Communist Party and the Ukrainian SSR Council of Ministers, Ukrainian SSR State Planning, and workers of a number of ministries and departments of the republic, and leaders in agricultural production.

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RESEARCH TO IMPROVE RYE PRODUCTION URGED

Kiev SIL'S'KI VISTI in Ukrainian 29 Mar 80 p 2

[Readers respond to SIL'S'KI VISTI article "Zhytniy Kolos" which appeared in issues dated February 26 and 27, 1980]

> [Text] An article by M Puhovytsya entitled "Zhytniy Kolos" [Rye Spikes] was published in SIL'S'KI VISTI (Nos 48, 49) under the heading "Reservy Khlibnoho Polya" [Grain Field Reserves]. It dealt with the reasons for decreasing the sowing area under rye, low crop productivity, and why its plant breeding is behind production needs. This article prompted many responses. Some of them are printed below.

"If the Efforts Were United" by A. Mayster, plant breeder, candidate of agricultural sciences, Volynskaya Oblast.

In the article "Zhytniy Kolos" a fair question was raised about what hinders the republic's plant breeders in creating new highly-productive varieties of winter rye.

Quite a few difficulties in rye spike formation are conditioned by this cereal's own peculiarities. Some crops lend themselves to plant breeding work, some do not. Winter crops belong to the latter group, it is much more difficult to work with them than with spring crops, because in the one month provided by nature between harvesting and sowing, an analysis of plant breeding material has to be done, it must be threshed and the seed prepared for sowing (spring crop breeders do this work at eight months). At the same time, it is essential to fertilize allocated areas, to plow them, and complete the pre-sowing working of the soil. In addition, rye plant breeding material must also be allocated to many isolated plots, the distance between them amounting to kilometers. These are the so-called objective difficulties.

Then there are subjective difficulties. Plant breeders need not be envied when they deliver to state trial a new rye variety. Threshing, cleaning and sending seed to strain-testing stations must be accomplished within a short period by one or two scientific workers and as many laboratory assistants. Last year we received for trial purposes a new variety "Luchanka"; this year another more productive variety could be tried. But that is only wishful thinking. We would not be able to fulfill this work, because we do not have enough people, and there is no good winnowing technology.

In state strain testing a new variety can show its potential only if its agrotechnology is worked out; the need is especially felt now because short-stemmed strains are being received for testing whose agrotechnology has not yet been developed.

In order to introduce a new strain quickly, seed production must be simultaneous with delivery to state strain testing. These problems are again shouldered by the one or two scientific workers.

There would be fewer difficulties if the complex research mentioned in the article were applied more extensively. The laboratory of grain technology could develop the agrotechnology for a new strain, seed production could be handled by a seed production section of the originating organization. These subsections are to be found in all research stations; unfortunately, however, this work division is not practiced.

The All-Union Institute of Selection-Genetics and the Myronivs'kyy Scientific-Research Institute on Wheat can be used as examples of good organization of the selection process. Not only because they have powerful phytotrons and climatic cells, but also because many participate in breeding new strains. In those institutes the work of all subsections is directed towards maximal provision of plant breeders' needs. This concern pays for itself a hundred times.

As a crop, winter rye today is in a difficult period: sowing areas are decreased, productivity is low and increasing slowly. The situation can change drastically, however, if plant breeders provide new short-stemmed highly-productive strains. The possibilities for this exist since the potential of winter rye is higher than of wheat. It is more resistant to frost, drought and diseases, less demanding to soil type, its fertility and predecessors. In like conditions winter rye in the strain-testing stations of our country yields more than winter wheat.

Yet, small and varied groups work on breeding new varieties of rye in organizations subordinated to various departments. The efforts of spike breeders are poorly coordinated, and lacking complex research, many important questions are not developed at all.

Providing all scientific-research centers dealing with winter rye selection with the essential number of people, contemporary technology, climatic cells, constructing phytotrons in each is, of course, a complicated goal. But the solution may be found by uniting all efforts.

"A Valuable Crop" by H. Borysenko, retired agronomer, Dniepropetrovskiy Rayon, Dniepropetrovskaya Oblast.

Many residents of our settlement "Pidhorodne" read the article "Zhytniy Kolos" with satisfaction.

Without underestimating the role of wheat at all, it can be said that bread made of rye flour contains many life-important mineral salts, especially calcium, magnesium, zinc, etc.

Rye does not require special soil, is winter hardy and grows in a temperature of one-two degrees. It has long been cultivated not only in the wooded zone, but also in the republic's chernozem of the forest-steppe and steppe areas. The crop grew well in the Dniepropetrovsk, Zaporozhe, Kherson and Krym areas where it was brought by settlers from the northern regions. In droughty years, which occur often in the south, rye served as a promising insurance crop.

In addition, the cereal is an excellent predecessor for melon crops, especially when fields were cultivated with surface tilling equipment prior to sowing. It has the most developed root system of all spike crops and renews soil structure well.

Every aspect of rye considered proves that it is a valuable and beneficial crop. Therefore, areas allocated to it should be expanded.

"The Harvest Will Pay for the Efforts" by I. Vashchenko, I. Halepa, V. Mykhaylenko, S. Panasets'kyy, M. Kholyava, kolkhoz workers, Borznyans'koy Rayon, Chernigovskaya Oblast.

In our village "Khovmy" after the war rye almost lost its meaning in crop rotation. It supposedly does not provide a good harvest. If sufficient attention were paid to this crop in the woodland area, there would be a large harvest.

We are grateful to the paper for the article "Zhytniy Kolos" and will hope that rye will again take its place in crop rotation. Scientific workers, and managers of the republic's oblast and rayon organizations need to pay more attention to this valuable grain crop.

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TILLING AND CROPPING TECHNOLOGY

MEASURES FOR RAISING RICE HARVESTS IN DAGHESTAN

Moscow SEL'SKAYA ZHIZN' in Russian 23 Mar 80 p 1

[Article by Yu. Semenenko (Krasnodarskiy Kray): "Rice of the Kuban'"]

> [Text] This year the Kuban' farmers plan to obtain 1 million tons of rice. Approximately 670,000 tons of this amount will be sold to the state. The kray party organization and all workers in Krasnodarskiy Kray are directing their efforts towards carrying out this task.

In carrying out this great work, a great amount of reliance is placed upon the land reclamation specialists. Fine work is being performed by the collectives of Glavkuban'risstroy subunits. Throughout the winter, they were busy installing and modernizing irrigation systems. Their work tempo increased in the spring and thus, just as planned, up to 220,000 hectares will be added to the sowing areas for the rice check plots.

During the autumn period, 540 rice growing teams, jointly with the machine operators, carried out deep fall plowing on the entire area and fertilized it. Efficient work was carried out in connection with personnel training, seed preparation, the repair of equipment and hydraulic engineering installations and the cleaning of the irrigation and collector-drainage networks. Taking into account the increase in the rice growing areas, the state allocated additional fertilizers for them. No less then 18 quintals per hectare are to be applied. New mobile and stationary pumping stations, tractors, combines, plows and other machines have all made their appearance. At the present time, the assembly and testing of new equipment are nearing completion and fertilizer is being delivered to the tracts and supplied to the check plots.

On the eve of the spring field operations, at all of the rice growing kolkhozes and sovkhozes, meetings of the party-economic aktiv were held, with members of the bureau of the kray party committee and the executive committee of the kray soviet participating in them. The status of affairs in rice growing was analyzed in a business-like manner during these meetings and the means and methods for achieving the planned goals were outlined. The schools of leading experience for field team leaders and irrigation specialists proved to be of great assistance. They were of particular benefit to those who in the past were unable to cope with their responsibilities. All of this made it possible to develop effective tactics for each specific field.

The collective of the Kuban' Training-Experimental Farm, which annually obtains high harvests and which is a type of training ground for leading experience, became the leader in the competition for rice growers. Here the decision was made to harvest not 70, as earlier planned, but rather 75 quintals of rice grain from each hectare.

The check plots of this farm commence immediately beyond the boundaries of Krasnodar, at the bend in the Kuban' River. Work is presently being carried out at a feverish pitch here. The booms of the excavators move up and down in a methodical fashion as they remove silt from the irrigation network. The scrapers move rapidly alongside the check plots in a business-like manner as they improve upon the ridges and dams, while the tractors rumble along under a strain as they replow the autumn plowed land. The sowing units, rollers and other equipment have all been made ready for operations, equipment which before long will be placed in operation. First class seed has been procured for the entire area.

An object of constant concern by the rice growers is that of raising the fertility of the soil. At the present time, one sees hundreds of motor vehicles, tractors and self-propelled undercarriages on the roads that are loaded with organic and mineral fertilizers. They are being transported to the check plots, where they are immediately placed in the soil. Against a plan calling for 60,000 tons, more than 50,000 tons of organic fertilizers have already been delivered in behalf of this year's crops by the fertility detachment at the Sovetskaya Rossiya Kolkhoz in Krasnoarmeyskiy Rayon. A powerful tractor with a wagon in tow is driven up to the loader by Yuriy Sushko. Three minutes later the machine is sent off to a check plot and its place is taken over by a tractor operated by Aleksandr Kuzhil'niy. The kolkhoz machine operators are presently delivering organic fertilizers to fields located on lowlands. Approximately 50-60 tons of organic fertilizer are being applied to each hectare and this will improve substantially the reclamative status of the lands.

Mole plowing ensures a high return when carried out on such tracts of land. The mole drains are installed using special machines. One such unit is operated by machine operator Dmitriy Kochura. He has already tilled 65 hectares using a mole plow. The drains are installed crosswise to the check plots, so as to ensure that the water which warms the arable land gathers in the channels cut along the contour of the check plots and runs into the collector network through the discharge headstall.

"The soil is damp and lends itself very well to mole plowing" commented the machine operator, "no less than 500 hectares will be tilled using this method at the kolkhoz."

A number of operations are nearing completion on the farm: ridging the intra-check plot channels, repairing the dams and slopes of canals. The irrigation workers also have many concerns. There is still no water in the canals; the rice growers are removing weeds from them. This work has been carried out on 340 hectares, against a plan calling for 387 hectares. Current and capital repair work on the hydraulic engineering installations is nearing completion.

Krasnoarmeyskiy Rayon is the flagship for rice growing in the Kuban'. This valuable groat crop will be grown here this year on 71,000 hectares -- 11,500 more hectares than last year. The decision has been made to obtain 55 quintals of rice from each hectare.

"The rice growers on all of the farms" related the 1st secretary of the rayon party committee N.I. Gorovoy, "have joined actively in the competition to fulfill the obligations. Just as in the past, the example is being set by the initiators of the movement to obtain the highest yields of the "white grain." A principal factor is the mass nature of the competition. Approximately 900 field team leaders and irrigation specialists are participating in it and they represent approximately 18,000 hectares. They have vowed to obtain 75-100 quintals of grain from each hectare."

Here, on the check plots of rice growing innovators, many efficient methods have been developed for the cultivation of rice, methods which are now being introduced extensively on fields throughout the rayon. This includes a system of deep drainage which radically improves the reclamative status of land, the ridging of intra-check plot channels using special hoes and the sowing of rice during very early periods, with deep placement of the seed for use on 6,000 hectares, and with local applications of mineral fertilizers -- on 20,000 hectares. This was 10 times more than the figures for last year. The increase in yield is 5 quintals per hectare.

Fine results are being obtained from grading work carried out under levelling control procedures. Geodetic instruments are being employed for smoothing out the surfaces of the check plots; such work will be carried out this year on one half of the area under crops. Mole plowing of the check plots has already been carried out on 3,100 hectares.

A great amount of work has been carried out throughout the rayon in connection with personnel training. Practically all of the higher and middle echelon leaders and specialists, field team leaders and irrigation specialists have raised the level of their knowledge through courses undertaken at the Krasnoarmeyskiy Sovkhoz or at schools for leading experience.

Before long the sowing units will be moved out onto the fields and the canals will spring to life as water is added to them. The Kuban' rice growers are doing everything possible to ensure that their high obligations are fulfilled in an honorable manner.

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TILLING AND CROPPING TECHNOLOGY

MINISTER DISCUSSES INCREASING RICE HARVEST IN DAGHESTAN ASSR

Moscow SEL'SKAYA ZHIZN' in Russian 27 Mar 80 p 2

[Article by Sh. Mamedov, Minister of Agriculture for Daghestan ASSR: "In the Terek River Valley"]

> [Text] What should be done in order to achieve a considerable increase in rice production in Daghestan?

Rice in Daghestan is by no means a new crop and formerly it was cultivated with almost no use being made of agricultural equipment. The saline land was leached out to only a weak degree and this led to their secondary salinization. But in recent years the construction of engineering rice systems was begun in Daghestan, with rice crop rotation plans being mastered at specialized sovkhozes in Kislyarskiy, Babayurtovskiy, Tarumovskiy and Khasavyurtovskiy rayons. Eleven specialized sovkhozes are presently supplying more than 80 percent of the republic's gross production of rice.

We are firmly convinced that rice is the most promising grain crop for Daghestan. In addition, it is of tremendous importance from a land reclamation standpoint, it promotes the use for agricultural purposes of water-logged land and land which was formerly barren and saline and it permits the development of such land for the cultivation of other agricultural crops.

During the years which have elapsed since the May (1966) Plenum of the CPSU Central Committee, engineering rice systems have been built on 33,000 hectares throughout the republic. This has made it possible to develop large tracts of land which were formerly unproductive. At the Gor'kovskiy, Put' Lenina and Oguzerskiy sovkhozes in Kizlyarskiy Rayon, owing to modernization of the Staro-Terechnaya irrigation system, success was achieved within a comparatively short period of time in raising the cropping power of rice by twofold and its gross production by fourfold.

A considerable amount of experience has been accumulated throughout the republic in obtaining high yields of the white grain. Field teams on farms in Taromovskiy Rayon have been obtaining 40-45 and more quintals from each hectare and, as a result, the tasks for 4 years of the five-year plan for the production and sale of rice to the state have been fulfilled successfully. The farms in Babayurtovskiy Rayon also fulfilled their plans for the 4 years.

The "secret" which enabled these collectives to obtain high rice yields lies in strict observance of the complex of agrotechnical methods employed for cultivating the crop. Thus, for example, the team headed by A.N. Popovkinaya at the Put' Lenina Sovkhoz grew rice on 320 hectares of autumn plowed land, on 138 hectares of a perennial grass bed and on 232 hectares following spring plowing. In the spring, for the purpose of combating reeds, double replowing of the fields was carried out to a depth of 20-25 centimeters using plows with elongated plowshares and also double disking, levelling off and smoothing out operations. The Krasnodarskiy-424 variety was sown. The team obtained 47 quintals from each of 530 hectares and from 24 hectares -- 71 quintals of rice.

Nevertheless, the cropping power of the white grain continues to remain low for the republic as a whole -- 32-35 quintals per hectare. Last year, for example, it amounted to 31.8 quintals from each of 23,400 hectares.

The experience of leading workers underscores the fact that we have many reserves at our disposal for raising the effectiveness of rice production. Thus the republic's organs are devoting a great amount of effort towards ensuring that leading experience is made available to each farm. Seven and eight-field crop rotation plans have been developed and are presently being mastered at specialized sovkhozes, with alfalfa serving as the accompanying crop and fine predecessor crop for the rice. An indispensable part of the crop rotation plans is also a reclaimed field on which, during the summer, capital-restorative, levelling off and other types of work were carried out.

The total expenditures for 1 hectare of rice plantings, at sovkhozes throughout the republic, amount to 635-645 rubles, which is on a level with average expenditures for sovkhozes in the RSFSR. Although this is within the normal limits, we nevertheless believe that the expenditures can be reduced in the interest of lowering production costs. This can be achieved by realizing further improvements in the quality of the work being carried out.

Solutions must be found for a number of problems. First of all, there is the matter of weak water supply from the Terek River. Notwithstanding the acute shortage of irrigation water throughout the north Caucasus as a whole, not one regulating reservoir is as yet available along the Terek River. As a result, during the check plot flooding period the watering of other irrigated tracts ceases almost entirely and the runoff required to satisfy the needs of the fishing economy is reduced to a minimum. But even these measures do not make it possible to flood the rice more rapidly than within 50-70 days and this, beyond any doubt, adversely affects the germinative capacity of the seed and the density of the plant stands, which remained without water for an extended period of time. In addition, on tracts which were late in being flooded the rice is delayed in ripening and on some sectors it may not ripen whatsoever.

Another problem and one which is associated with the first one is that of the great muddiness of the Terek River water. During the initial flooding operation, it tends to fill up the rice check plots with mud and silt, thus bringing about a thinning out of the seedlings. The irrigation units also become severely clogged up with mud and silt and must necessarily be cleaned 2-3 times during the growing season. In behalf of the 1979 harvest alone, in Kizlyarskiy Rayon, cleaning of the intra-farm network was carried out in a volume of more than 2 million cubic meters. According to measurements carried out during the growing season at the Gor'kovskiy Sovkhoz by the Sevkavgiprovodkhoz Insitute, there were 34.46 tons of silt for every hectare of rice check plot, of which amount 33.71 tons remained in a check plot.

It should be emphasized that the silt and mud contamination is local in nature: a debris cone forms near the water discharge units and it distorts the relief to a severe degree, it creates vexing misalignments and it disrupts the maintenance of an optimum water regime -- the foundation for a high yield -- throughout the entire area of a check plot.

In this regard, we have become extremely anxious regarding the weak development of the production base for the aquicultural operational organizations. They are not coping with the increasing volumes of repair work to be carried out on the rice systems, particularly with the capital-restorative levelling off of the check plots. At the same time, land reclamation machines are not being allocated to the farms.

The technical level of the engineering rice systems still leaves a great deal to be desired. For example, anti-filtration measures are not called for in either the intra-farm or inter-farm networks. In addition to great losses of water, this also tends to raise the level of highly mineralized ground waters.and it brings about a deterioration in the reclamative status of lands. On a number of farms, the open drainage called for in the plans for heavy textured soils is not ensuring desalinization of the land.

Old riverbeds -- Talovka, Staryy Terek, Borozdinka and Sullu-Chubutla -- adapted as primitive type canals, serve as the main water arteries to which the principal rice tracts "are attached." They are insufficiently equipped with water intake units and other hydraulic engineering installations and this precludes the possiblity of obtaining water from them at low levels and emergency situations develop when maximum discharges are obtained from them. At the present time, more than 10,000 hectares or 30 percent of the engineering rice systems require modernization.

Although rice suffers from a shortage of water along the lower reaches of the Terek River, in Khasavyurtovskiy Rayon a problem of another type prevails. Here the water of the mountainous Sulak River is very cold and thus the rice seedlings are severely depressed during their first month of growth. With regard to further expansion of the rice plantings, the problems concerned with the construction of sedimentation tank-heaters require examination.

The planning for aquicultural construction for the Staro-Terechnaya irrigation system, where more than 60 percent of the rice systems were installed, was carried out by one institute and that for projects of a production and cultural-domestic nature -- by another institute. This led to considerable production discrepancies and problems. At the present time, we must build additionally a grain thrashing floor, seed storehouses, cleaning and drying stations and other projects. Indeed, all of these facilities must be planned and built on a complex basis.

Special difficulties arise during the construction of cultural-domestic projects. For this reason alone, the average annual number of workers at the newly created Oguzerskiy Rice Sovkhoz in Kizlyarskiy Rayon was more than two times less than the number required. As a result, the workload per rice irrigation worker was very high at this and other farms throughout the rayon. At times, these individuals each service 100 or more hectares of rice plantings.

As is known, the five-year plans for the production and sale of rice are coordinated with the plan for placing rice systems in operation. However, during the years of the Ninth Five-Year Plan, the republic's rural workers were undersupplied with engineering systems by 5,500 hectares and during 4 years of the current five-year plan -- by 4,000 hectares. Thus the development of crop rotation plans was disrupted on the farms and sowing was tolerated on semi-engineering and primitive tracts, an action which adversely affected fulfillment of the task for the production and sale of rice to the state.

During the final year of the Tenth Five-Year Plan, the republic's rice growers are confronted by a responsible task -- to produce more than 100,000 tons and to sell no less than 70,000 tons of the "white grain" to the state. Towards this end, the plans call for rice to be grown on more than 26,000 hectares.

Approximately 100 teams will participate in the socialist competition for the successful fulfillment of plans. During the winter months, many rice growers underwent additional training in the interest of improving their knowledge. New experts in this work are being trained at the Daghestan Experimental Land Reclamation Station. Specific measures have been developed and approved by the republic organs for increasing rice production during 1980. In particular, these measures call for improvements in the supply of water and higher rates for the construction of rice systems. In the principal rice growing rayon, Kizlyarskiy Rayon, a new specialized northern PMK [mobile mechanized column] will be created for the capital-levelling off of rice check plots. Land reclamation will provide the impetus for creating new specialized rice growing sovkhozes based upon the Tal'minskaya irrigation system.

All of the resources of the republic's party organization, the agricultural organs and all Daghestan farmers are being directed towards the carrying out of the established tasks associated with the development of rice growing.

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BRIEFS

NEW RICE VARIETIES--In 1980, a new rice variety known as "Spal'chik" will be regionalized and enter production on an extensive scale. It was bred at the All-Union Scientific Research Institute of Rice (Krasnodarskiy Kray). "Spal'chik," the panicles of which have a high grain content, was exhibited at the "Grain" Pavilion. The variety is described by the following data. During the years in which it underwent testing at strain testing stations in Krymskaya Oblast, its average yield amounted to 80.5 quintals of grain per hectare and its highest yield -- 109.9 quintals. It is a midseason maturing variety and it ripens 5-15 days earlier than the extensively used "Krasnodarskiy-424" variety. "Spal'chik" has short stalks, with the height of the plants reaching 80-90 centimeters. When raised dosages of nitrogen fertilizers are applied, the length of the stalks increases to only a minor degree, but in return the grain content of the panicles increases and high resistance against lodging is retained. It has fine technological and groat qualities. "Spal'chik" is being regionalized in Krasnodarskiy Kray, the Turkmen SSR and in Krymskaya Oblast. In certain rayons in the Kuban' region, the new rice variety "Start" has revealed its advantages compared to the standard variety. It is also a short-stalked, highly productive and lodging resistant variety. Its technological and groat qualities are higher than average. During 1980, "Start" will be regionalized in a number of zones in Krasnodarskiy Kray. A sheaf of "Start" is also on exhibit at the pavilion. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 11 Mar 80 p 2] 7026

PRIMORSKIY KRAY RICE FIELD--The article bearing the title "Primorskiy Kray Rice Field" was published on 9 January. The Editorial Board has been informed by the secretary of the Primorskiy Kray CPSU Committee, Yu. Strokonev, that the article was reviewed by the kray party committee, discussed by the collectives of rice growing and land reclamation organizations throughout the kray and adjudged to be correct. Specific measures were outlined for increasing rice production, improving the culture of farming, the capital repair work being carried out on rice systems throughout the kray and personnel training and ensuring that the rice growing farms are supplied with mineral fertilizers, herbicides, toxic chemicals and equipment. Other measures were also defined for creating the conditions required for highly productive labor by the rice growers and also for increasing the return from reclaimed lands. In addition, the questions raised in the article will also be examined during a kray conference. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Mar 80 p 3] 7026

PEAS FOR FORAGE PURPOSES--Valuable practical results have already been achieved from the special breeding of peas for feed purposes. Varieties have been created which are capable of developing strong fodder that is rich in protein. New regionalized varieties of fodder peas were presented for review at the "Feed" Pavilion. Here is some data on several of these varieties. The "Voroshilovgradskiy-29" variety of fodder peas was created at the Voroshilovgradskaya Oblast Agricultural Experimental Station. The station sent a sheaf of peas for review that had been obtained from a field which, in 1979, produced 389 quintals of fodder per hectare. This corresponds to 50 quintals of feed units containing 972.5 kilograms of digestible protein. Here is a notable comparison. In order to procure such a quantity of protein in oats grain, a yield of 114 quintals per hectare must be obtained and in the case of barley -- 120 quintals per hectare. As yet, nobody has achieved such high indices. Among those presented for review was the "Khar'kovskiy-74" variety of peas -- developed at the Ukrainian Scientific Research Institute of Crop Production, Selection and Genetics imeni V. Ya. Yur'yev. In 1979, it furnished 498 quintals of fodder, or 125 quintals of hay per hectare. The materials of the review underscore the great prospects for fodder peas as a valuable source of digestible protein. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 18 Mar 80 p 2] 7026

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AGRICULTURE

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MAJOR CROP PROGRESS AND WEATHER REPORTING

REPORT ON WINTER CROP STATUS AROUND USSR

Moscow SEL'SKAYA ZHIZN' in Russian 7 Mar 80 p 2

[Article presenting materials prepared by the scientific workers of VASKhNIL [All-Union Lenin Academy of Agricultural Sciences], zonal scientific-research institutions and specialists of the main administration of grain crops and of the main administration on general farming questions in the USSR Ministry of Agriculture: "Winter Fields"]

[Text] Winter crops play a large role in the grain balance of our country. They provide about one-third of the entire yield of grain. The goals of farmers include utilizing all potential possibilities of the winter fields and securing the largest harvest and gross yields of grain in every kolkhoz and sovkhoz.

Last fall winter crops were in better condition than the year before by the time the snow came. Their overwintering is coming to a close successfully almost everywhere. Now the fate of the harvest will depend greatly on the timeliness and quality of crop care.

Especially important is early spring top-dressing, primarily utilizing nitrogen fertilizers. This agricultural method also increases plants' resistance to diseases and it must be utilized as an important means of obtaining a large yield. Top-dressing should be differentiated by schedule and rate of fertilizer application according to the conditions of the crops and the characteristics of the variety. The most important condition is the application of fertilizer into moist soil and its uniform distribution in the field.

In order to raise the quality of winter wheat grain it is effective to apply nitrogen fertilizers, and in particular a solution of carbamide (synthetic urea) at a rate of 30-45 kilograms of active matter per hectare. The best time is the phase of ear formation to the beginning of the phase of milky ripeness.

TUR preparation should be utilized in places where the frequent lodging of winter crops is observed. It is usually used to treat crops of tall-stalk varieties that have been planted after the best predecessors, that have received good doses of organic and mineral fertilizers and in all cases that have been provided proper conditions for the intensive growth of the vegetative mass. The optimal period is from the end of tillering to the beginiing of the booting stage, when the height of the plant is 15-25 centimeters. The best dose is 4 kilograms of active matter per hectare.

If necessary enterprises can sow additional winter crops or resow fields. Resowing should occur only when the yield of winter crops is expected to be lower than that of spring grains.

The utilization of agrotechnical methods must be based on the requirements of winter crops under specific soil-climactic conditions.

The Ukraine and Moldavia

In the steppe rayons of the Ukraine the reserves of soil moisture are limited and for this reason in order to cultivate a large harvest the most important methods will be those that secure the maximum accumulation of moisture and its preservation and productive use during the vegetative period. Also, in some fields, especially after non-fallow predecessors, the processes of nitrification were slowed and plants began to turn yellow in the fall because of the shortage of nitrogen in the soil. These crops should be top-dressed first. The most effective time to top-dress the crops with fertilizer is as early as possible while the soil still contains sufficient moisture. In this case the nutrients that are dissolved in the water penetrate into the bottom layers and the root system of the plant can utilize them more completely.

When there are sufficient moisture reserves and frequent spring rains the best results are achieved by a top-dressing with nitrogen fertilizers mixed with other mineral fertilizers. In tests conducted by the Scientific-Research Institute of Farming and Livestock Farming of the Western Rayons of the UkSSR through the use of this method there was an increase in yield averaging 5.4 quintals per hectare over an average of 3 years. Moreover, the protein content in the grain increased by 1-1.3 percent and that of gluten--by 3.4-5 percent. On fields where mineral fertilizers were not applied earlier top-dressing should be done using complete mineral fertilizers at an application rate of 20-30 kilograms of nitrogen, phosphorus and potassium per hectare. The effectiveness of an agricultural method will be significantly higher if the nutrients are applied directly to the region of the root system with the aid of disc sowers.

It is important to think about the timely and quality harrowing of crops. If the time for this is past and a crust with cracks have formed over the surface of the soil, harrowers cannot be taken out into the fields.

On some fields winter crops become infected with grain carabide. In early spring, therefore, it is necessary to treat them with a 16-percent emulsion of gamma-isomerhexachloran (3 kilograms per hectare), or a 50-percent emulsion of metation (1.5 kilograms per hectare). In the fight against the chinch bug good results will be achieved by spraying with Trichlorfon and methyl parathion or metation. To combat brown rust a three-time treatment of plants is recommended using an 8-percent suspension of cinebe at a rate of 50 liters of active liquid per hectare. The first spraying takes place when the rust is developing and when no more than one-tenth of crops are infected with it. If the schedules for treatment with urea and cinebe coincide, the operations are unified.

It is important to locate sparse crops that will be subject to resowing or supplementary sowing with spring crops. In the steppe zone the best crop for resowing is corn. But barley and millet can produce very satisfactory yields if there are good moisture supplies in the soil and if the spring is a rainy one. If crops are uniformly sparse but the plants have bushed out to three shoots and more it is best not to resow them, but to top-dress them as a priority operation.

In the forest-steppe zone under favorable moisture conditions and the availability of a sufficient quantity of nutrients in the soil, with 180-200 plants per square meter, in most cases winter crops should not be resown. If crops are less dense and if the spring is late and dry, locational resowing should be utilized, particularly using barley. Corn for grain is put out in fields where sugar beets and winter crops will not follow wheat. In the Poles'ye it is best to resow winter crops with barley or oats.

The depth of pre-sowing cultivation of soil should be no less than 7-8 centimeters, which can be achieved by using KPE-3.8 and KPG-4 cultivators. Under conditions of rapidly increasing temperatures and a rapid drying-out of the soil resowing should be completed by SZS-2.1 sowers without preliminary cultivation. It is better to equip agricultural machinery and equipment with broad units with caterpillar tractors which do less harm to crops that tractors with wheels.

The Northern Caucasus

In the Northern Caucasus the overwintering of crops passed satisfactorily. It should be kept in mind that as a result of the drought during the first half of the summer the fall precipitation could not fully compensate for the shortage of moisture in the soil. The soil was dried out to a significant depth. For this reason measures must be taken here for the maximal accumulation of moisture during spring precipitation.

Crops that did not receive a sufficient quantity of fertilizer during initial cultivation should be top-dressed first and the dose should be increased by 20-30 percent. Nitrogen fertilizers are applied on the basis of moisture and nitrogen supplies in the soil. Under this year's conditions the application norms should not exceed 60-80 kilograms per hectare in the northern and eastern zones and 80-100 kilograms in the southern zones. If phosphorus fertilizers were not used in the fall it is essential to conduct radical top-dressing with nitrogen-phosphorus fertilizers at a rate of 40-60 kilograms of active matter per hectare on carbonate chernozem if crops are of normal density and well-developed.

For well-developed winter wheat and winter barley crops when there is a shortage of moisture in the soil top-dressing using nitrogen fertilizers should be conducted at a rate not exceeding 40 kilograms of active matter per hectare.

In order to increase the gluten content in grain under dry conditions late nitrogen top-dressing should occur during the period from the middle of the booting stage until blooming; and in moist rayons--from 2 weeks after the start of the booting stage until the beginning of milky ripeness. The dose is 30-60 kilograms of nitrogen per hectare.

On fields with a crop stand of 150-200 per square meter or even up to 250 if they are weak and not bushy, there should be a supplementary sowing of spring barley as soon as it is possible to move out into the fields. The sowing rate should be based on placing no more than 500 plants on 1 square meter. Seed spacing should not be made dense because this can decrease productivity.

In order to form a large harvest, 2-2.5 quintals of complete mineral fertilizers per hectare are applied during the supplementary sowing. If the seed cannot be placed at a depth of 4-6 centimeters it is better to conduct a surface soil cultivation and to resow winter crops with spring grain crops.

Chemical weeding is performed during the phase of tillering to the beginning of the booting stage. Poorly-developed and sparse winter crops with supplementary spring barley are treated with herbicides when they become stronger and of normal bushiness. Fields that are infested with bedstraw and buckwheat morning glories are sprayed with preparation 2M-4X PP (1.5-2.5 kilograms of active matter per hectare). It is expedient to use 2.4-D herbicide and liquid nitrogen fertilizers simultaneously.

Recently root rot, rust diseases and septoria spot diseases have become widespread in the Northern Caucasus. There has been an increase in the quantity of mouselike rodents. In connection with this, after the soil dries each enterprise must determine their location and organize their elimination. At the first signs of brown rust, the threat of which is growing today, crops must be treated three times with cinebe plus urea. Potassium extract is recommended as a prophylactic means. It is also important to combat the leaf beetle, ground beetles and the larvae of the grain beetle.

Central and Lower Povolzh'ye

The winter-hardiness of winter crops was somewhat poorer than usual. For this reason agronomists here are obliged to make an especially careful analysis of the condition of crops and to organize crop care according to the specific conditions of each field. If resowing is required in some places, primarily millet, spring wheat and barley should be utilized. All fields of well-developed winter crops must be harrowed in one or two steps as soon as the soil is ready regardless of the size of crop damage.

If the plants were not fertilized in the fall, nitrogen fertilizer should first be used for poorly-bushing shoots that are optimally dense. When the soil is ready, radical top-dressing is performed. For crops that became bushy in the fall this is more expedient than early-spring surface top-dressing. The rate of nitrogen fertilizer per hectare is differentiated according to the predecessor: on clean fallow--20-30 kilograms of active matter; on occupied fallow--40-60 kilograms; in the remainder of cases---60-90 kilograms. In order to improve the quality of the grain it is expedient to perform top-dressing operations again during earing or at the beginning of grain formation in winter wheat.

Sometimes winter crops form a large surface mass and lodge, especially in the chernozem zone on clean fallow and in the forest-steppe on fertilized occupied fallow too. As has already been noted, in combatting the lodging of wheat TUR preparation should be utilized; for rye--campozan.

Central Chernozem Zone

Here the condition of the crops is generally significantly better than in recent years. Over 90 percent of them are in good or satisfactory condition. An ice core is very dangerous. To remove the ice from the surface of fields 3-5 tons of humus and 1-3 quintals of potassium salt are distributed per hectare.

Nitrogen top-dressing must take place on the entire area. The norms for fertilizer application must be established for each field according to the availability of nutrients in the soil and to the predecessors. The winter crops that should be top-dressed with nitrogen fertilizer first are those that were given superphosphate as the initial fertilizer in the fall or those found in fields that have an increased phosphorus content according to the data of agrochemical cartograms.

Top-dressing is conducted immediately after the snow leaves the fields. This avoids the washing away of mineral fertilizers with water from thawing snow. When the upper layer of soil is dry it is expedient to move to a local method of fertilizer application using grain-mineral fertilizer sowers with a placement of seed to a depth of 4-6 centimeters. To improve the quality of the grain it is expedient to plan for combining the non-radical top-dressing of winter wheat during the phase of ear-formation using a 20-percent solution of urea at a rate of 30 kilograms of nitrogen with the application of poisonous chemicals to combat pests, and beetles in particular.

We also cannot forget the skilful, differentiated harrowing of winter crops that have remained. This can encourage a significant increase in yield. It is true that poorly developed crops that did not become bushy in the fall should not be harrowed. When possible they should be cultivated with rotary hoes.

If overwintering has been unfavorable, if a square meter has 200-250 stalks of wheat or 150 of rye and there is an early spring, crops should not be resown because they can provide a relatively good harvest. If spring vegetation is more than 5 days late, poorly-developed, sparse winter crops should be resown with spring grain crops.

The Non-Chernozem Region of the RSFSR

In this zone overwintering is proceeding normally and all crops are dependably covered with snow. If winter crops are sparse or ruined the underproduction of yield can be brought to a minimum through the timely and quality "repair" or resowing of barley. The sowing rate of seeds for crops supplementary to wheat is 80 percent of the accepted rate.

If density is less than 100 plants per square meter the area is resown with spring grain crops. An exception is uniformly sparse or spottily dead rye. Supplementary sowing on the total area is not effective because the barley is almost completely overwhelmed. It is better to replow the land mass or to selectively cultivate in areas where the rye is dead, with the subsequent planting of barley here only.

The first top-dressing is made to coincide with the beginning of the revitalization of the plant; the second--with the maturation of the soil with the application of fertilizer to a depth of 3-5 centimeters with the aid of grain-mineral fertilizer sowers. First 30-40 kilograms of active matter in nitrogen fertilizer is applied per hectare, followed by the remainder.

Belorussia and the Baltic States

In sowing winter rye after clover, feed lupine and other pulse crops and their mixtures as well as after grains with the application of organic fertilizers the optimal dose of nitrogen for top-dressing is 60-70 kilograms of active matter per hectare; and after grains without organic fertilizers--70-90 kilograms. Two-thirds of the mineral fertilizers can be applied in early spring and one third during the phase of beginning ear formation. This type of distribution and the growth of yield noticeably raises the protein content in grain. The fractional application of fertilizer on light soils is especially important.

A mandatory device in cultivating winter crops is the harrowing of crops. Timely and quality harrowing secures a growth in productivity. When plants are protruding harrowing should not be done because the teeth of the harrow pull them out and damage them. In such cases packing is recommended, including using heavy water-carrying rollers for peat-swamp soils.

In order to increase the resistance of winter rye to lodging and the effectiveness of nitrogen fertilizers crops are cultivated with campozan at the beginning of the booting stage.

The Urals and Siberia

In this zone the winter crops that were sown at the optimal time are now in good condition. Crops have bushed out normally, forming 3-5 stalks. On fields where sowing was late poor development has been noted and plants began their overwintering in the phase of 1-3 leaves. Agronomists have been called upon to specifically determine the condition of each such land section and measures for their care.

In a number of oblasts the washing out of active forms of nitrogen was noted last fall. This means that mineral top-dressing is mandatory, firstly on unfertilized fields, in doses of 1-2 quintals of ammonium nitrite per hectare. On fields where plants are well-developed it is also necessary to plan for the application of nitrogen-phosphorus fertilizers. Phosphorus fertilizers will have to applied by means of the radical method when the soil is ready.

A creative approch by specialists to the care of winter crops while considering their condition, characteristics of the variety as well as the conditions of soil moisture and nutrition will become the foundation for the successful fulfillment of plans for grain production.

8228
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MAJOR CROP PROGRESS AND WEATHER REPORTING

CROP WORK PROGRESS THROUGHOUT USSR

Moscow SEL'SKAYA ZHIZN' in Russian 19 Mar 80 p 1

[Article by N. Osychkin, agronomist: "Which Seed Has Been Prepared for Sowing?"]

[Text] Each day the sun shines more brightly and spring is becoming more and more apparent. In the southern rayons of the country enterprises have already begun field operations. Soon it will be time for the mass sowing of spring crops. Farmers have expressed their decisiveness to complete sowing in an organized manner and in the best agrotechnical time, and to lay a firm foundation for the harvest of the final year of the five-year plan.

One of the most important conditions for the stable growth of agricultural production output is the sowing of all agricultural crops using high quality seeds of the first and second classes. In conjunction with the intensive application of other factors that determine the fertility of fields, this can significantly increase productivity. Thus, in the Osnezhitskiy Kolkhoz of Belorussia 45-50 quintals of grain per hectare are produced annually. There are also large yields of potatoes and feed crops. An important role in this is played by high-quality farming, the extensive utilization of fertilizers and the fact that all plowland is sown only with first-class seed. Even now selected seed is being stored in storehouses. Agronomists check its quality over and over and they organize the timely treatment of seed with protecting and stimulating preparations.

At the present time most of the country's kolkhozes and sovkhozes have the necessary quantity of seed for spring. Emergency funds exist. The basic task of farm directors, specialists, subdivisions of USSR Sortsemprom [Association of the high-quality seed industry], and of procurement organs consists of cleaning, drying and treating seed with protective agents by the start of sowing operations so that each kilogram would be of the very highest sowing quality. Almost all of the seeds of grain and pulse crops are in the conditioned category in the Ukraine, Belorussia, Kazakhstan and Moldavia. Success was furthered by the precise work of specialized brigades and links and by the efficient utilization of all grain-cleaning and drying technical means.

Interesting experience in seed farming has been amassed in Kirgiziya. Here this branch has received independent development and is being placed on an industrial base. In the republic specialized seed-farming enterprises with the required seed-processing technology have been allocated. They supply commodity enterprises with seed from regionalized highly-productive varieties. As a result there is a growth in the productivity and stability of agricultural production output. According to the data of laboratory analyses, in Kirgiziya almost all of the seed for grain and pulse crops is in condition now and 98 percent of them are included in first and second class for sowing quality.

Unfortunately, such concern for the golden fund of the harvest is not in evidence everywhere. In the enterprises of Latviya 33 percent of the seed was not prepared for sowing. The situation with the seed fund is serious in a number of oblasts and autonomous republics of the Non-Chernozem Region. Whereas on the average in the country, according to the data from the USSR Central Statistical Administration, 9 percent of grain and pulse crop seed is not up to standards, in this zone 26 percent is not. A significant portion of seed reserves are still not conditioned in Vologodskaya, Pskovskaya, Smolenskaya and Kirovskaya oblasts. Perm enterprises did not prepare half of their seed for sowing. Some directors of kolkhozes and sovkhozes and some specialists have stopped working with seeds in storehouses in anticipation of warm days. But spring conditions can become more difficult and then there simply will not be enough time to clean, dry and treat seed. This means that this important matter cannot be put off. It is essential to do everything possible to make sure that each hectare of spring fields is sown with conditioned seeds of good quality.

At the present time it is possible to raise the classification of seeds. For example, in Stavropol'skiy Kray and Voronezhskaya and Penzenskaya oblasts over four-fifths of the seed reserves belong to the first class of the sowing standard. But in large grain-growing regions such as Kurganskaya and Omskaya oblasts only 14-18 percent are first-class. Only one-third of all seed supplies of grain and pusle crops are first class in the enterprises of Bashkiriya and Ul'yanovskaya Oblast.

In preparing seed special attention must be given to new, highly productive varieties. In Siberia these are Omskaya-9 strong wheat and Almaz hard wheat; in the Povolzh'ye--Saratovskaya-46 and Krasnokutka-6. Promising varieties of barley, oats, peas, rice and cotton are appearing in the fields. All of them must be brought up to the highest levels of quality in order to secure a significant growth in yield.

This year for the first time it is planned to utilize industrial technology on 2.4 million hectares for cultivating corn, sunflowers, soy, sugar beets, and vegetables. Success will depend greatly on the quality of seed resources. It is essential to more quickly complete the calibration and unloading of seed for seed users and to achieve the complete preservation of seed and its sowing according to the recommended technology.

In a number of places there is an acute shortage of buckwheat, millet, flax and grass seeds. Their quality is far below standard. In Orlovskaya Oblast, for example, 66 percent of the buckwheat is not conditioned. But after all here the millet field is one of the largest in the RSFSR, and the soil must receive good grain. It is important to accelerate inter-enterprise and interoblast seed exchanges and obtaining seed from state reserves when necessary. Seed freight is now the most urgent.

"All sowing material is first class," is the slogan which must be used now while beginning competition for the model preparation of all seed for spring sowing.

8228
CSO: 1824

COOL WEATHER DELAYS SPRING FIELD WORK IN KIRGIZIYA

Moscow PRAVDA in Russian 5 Apr 80 p 1

[Article by V. Shirokov, PRAVDA correspondent, Kirgizskaya SSR]

[Excerpts] Sowing started today in the republic with a delay. It is as if this delay, caused by the cold weather, is urging the people onward. Time is being watched strictly.

The example of the forerunners assures us that a yield of 50 quintals of grain is presently accessible to many of the farms in Kirgiziya--if, of course, agrotechnical requirements are strictly observed. Unfortunately, deadlines for performing field operations and technical discipline are being met in very few places. For example, winter-crop dressing went very slowly in Kirovskiy Rayon. Here and there plowing of fallow fields is being delayed. The lag in preparation of an interfarm irrigation network and hydraulic engineering structures was also significant. Only a third of the overhead irrigation machinery was repaired on time in Issyk-Kul'skaya Oblast. Early spring irrigation has been started with a delay. Only 8.3 percent of the areas had been moistened by the middle of March, whereas they had not yet started this activity at all in Keminskiy Rayon.

A mass inspection of farms of Chuyskaya and Talasskaya valleys for preparedness for sowing, conducted by the republic's People's Control Units, showed that there was no concern for the preparation and storing of agricultural equipment on a number of kolkhozes. Thus on the kolkhoz "Put' k kommunizmu" Kalininskay Rayon, there were many unrepaired tractors and a good half of the plows and seeders required repeated repair. Many such shortcomings were found on the kolkhozes "Pobeda" and "imeni Krupskaya" in the same rayon.

The republic's grain farmers have now planned to bring the gross grain harvest to 1,500,000 tons, the plan being 1,400,000 tons. The commitments are high. To satisfy themselves successfully, it is necessary to get the planting done on time, for spring lays the foundation for the harvest.

9194
CSO: 1824

MILD WEATHER MARKS EARLY APRIL IN AGRICULTURAL REGIONS

LD251419 Moscow SEL'SKAYA ZHIZN' in Russian 16 Apr 80 p 1

[Report by agrometeorologist O. Pisarenko: "The Weather and the Crops"]

[Text] Mild weather persisted over the USSR's European territory in the first half of the 10-day period. Then (6-8 April) it became cooler in most regions. Night air temperatures during this period varied from minus 1 to minus 9 degrees and from minus 10 to minus 18 degrees in the Komi ASSR, the greater part of the Volga-Vyatka and Urals regions and individual regions of the Central Volga District. The minimum air temperature was above zero in the North Caucasus, Central Krymskaya Oblast and extreme south of the Volga region.

Rain fell everywhere. The heaviest rainfall (31-60mm) was in the southeast of Moldavia and individual regions of Odesskaya, Khersonskaya, Zaporozhskaya and Voroshilovgradskaya oblasts, in Krasnodarskiy Kray, West Stavropolskiy Kray and the greater part of Volgogradskaya Oblast.

In the majority of oblasts of the northwest region (except Pskovskaya Oblast), the Central, Volga-Vyatka and Urals regions (except Orenburgskaya Oblast) and the north of the Volga region, the winter grain crops and sown cereal and leguminous grasses were under snow. The depth of the snow cover north of the Petrozavodsk-Vologda-Kostroma-Gorkiy-Izhevsk line was 30-55mm or more.

Over the greater part of Krymskaya Oblast, in the south of Krasnodarskiy Kray, and in places in Stavropolskiy Kray the winter grain crops had reached the stem extension stage. In south Moldavia, in Zakarpatskaya Oblast, the south of Odesskaya, Nikolayevskaya and Khersonskaya oblasts and Zaporozhskaya and Bostovskaya oblasts, the north of Krasnodarskiy Kray and Stavropolskiy Kray, the winter crops are tillering and vegetation has regenerated on the sown cereal and leguminous grasses. On the remaining territory of the Ukraine and the south of Volgogradskaya Oblast, on certain days when the air temperature rose to 8-12 degrees, winter grain crops resumed vegetation.

The rise in daytime temperatures caused activation of growth processes in fruit crops in the central Chernozem and Nonchernozem zones of the RSFSR and in the Baltic republics. In Moldavia, the southern oblasts of the Ukraine and the North Caucasus buds swelled on apple, pear, plum and sweet and sour cherry trees. Sap is still rising and in places buds are swelling and opening on the vines.

The milk weather persisted in the Transcaucasus republics. The air temperature was 2-5 degrees above the annual average. Over the larger part of Armenia and Azerbaijan there was little precipitation, but in Georgia it was heavy (15-35mm and in places up to 90mm). In these regions the weather was favorable to the growth and development of winter grain crops. Buds are opening and the first leaves are developing on fruit trees. Apricot trees are blossoming.

In the farming regions of West Siberia and the north and northeast of Kazakhstan the weather grew colder at the beginning of the 10 days and cold weather persisted almost throughout the period. It grew milder only at the end of the 10 days. The winter grain crops and grasses here were in a state of winter dormancy, under snow cover mostly 15-30cm deep. There was no snow cover, or its depth was less than 50m, in Altayskiy Kray and the south of Omskaya, Novosibirskaya and Kemerovskaya oblasts. The temperature at winter crop tillering node depth was mostly minus 6-12 degrees. Winter conditions were satisfactory.

Very mild, rainy weather persisted in the central Asian republics. The line beyond which apricot trees are blossoming moved to the southern oblasts of Kazakhstan. The first leaves are continuing to develop on mulberry trees and vines.

CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

REPORT ON MID-APRIL WEATHER, CROPS

LD011519 Moscow SEL'SKAYA ZHIZN' in Russian 24 Apr 80 p 1

[Report by agrometeorologist O. Pisarenko under the rubric "The USSR Hydrometeorological Center Reports": "Weather and Crops"]

[Text] The weather was warm in the European territory of the USSR at the start of the April 11-20 period. This was followed by a fall in temperatures. Warm weather returned to most areas at the end of the period.

Precipitation occurred everywhere. It was greatest (31-60mm) in the northern and eastern half of Saratovskaya Oblast, in a number of rayons in the Central Volga region, in the Kabardino-Balkarskaya ASSR, the Severo-Osetinskaya ASSR and in parts of Krasnodarskiy and Stavropolskiy krays.

In most southern oblasts of the Ukraine, in Moldavia, over most of the North Caucasus and in the south of Volgogradskaya Oblast winter grain crops were at the tillering stage, while in the south of Odesskaya, Khersonskaya and Zaporozhskaya oblasts and in some fields in Moldavia and in Lvovskaya and Khmelnitskaya oblasts winter wheat had reached the stem extension stage. In Krymskaya oblast and in the south of Krasnodarskiy and Stavropolskiy krays stem growth continued on winter crops. In the Baltic republics, Belorussia, the Central Chernozem region, parts of the southern oblasts of the central region, the northern oblasts of the Ukraine, the northern part of Volgogradskaya Oblast and in Saratovskaya and Kuybyshevskaya oblasts winter grain crops vegetated feebly.

In the southwest of the Baltic republics and in the western oblasts of the Ukraine and Belorussia, where average air temperatures during the period were 5-7 degrees, fruit and berry crops developed actively. In all these areas the buds on apple, pear, plum and cherry trees swelled. In Krasnodarskiy and Stavropolskiy krays, the autonomous republics in the North Caucasus, and in Moldavia and the southern oblasts of the Ukraine the first leaves on fruit crops are still opening, while in the south of Krymskaya Oblast the apricot trees are in bloom.

Mass field work was carried out in Moldavia, the south and southeast of the Ukraine and in the North Caucasus and the lower Volga region under good or satisfactory weather conditions.

In farming areas of West Siberia and in western and northern oblasts of Kazakhstan the weather was unusually warm, with daytime air temperatures reaching 11-15-20 degrees and more. Precipitation was heaviest in the southern rayons of Omskaya Oblast, the western rayons of Tyumenskaya and Kurganskaya oblasts and the northwestern oblasts of Kazakhstan (15-25mm).

In these areas winter rye resumed vegetation at near-normal times. Grasses and clovers began sprouting. The grasses which had resumed vegetation and winter crop sowings had wintered satisfactorily.

In the central Asian republics and souther oblasts of Kazakhstan the weather remained warm. Daytime air temperatures rose to 30-38 degrees. At the end of the period it grew colder in these areas. There were frosts in the valleys of Kirgizia. In southern oblasts of Kazakhstan and in the northern rayons of the central Asian republics minimum air temperatures were 1-4 degrees, while in the southern rayons they were 7-12 degrees.

Rainfall was heaviest (11-30mm, in places 35-40mm) in the Talas and Chu valleys, in Tashkentskaya, Bukharskaya, Syrdarinskaya, Dzhizakskaya and Zamarkandskaya oblasts, the south of Chimkentskaya Oblast, in Dzhanbulskaya and Alma-Atinskaya oblasts, and in Tadzhikistan. Precipitation was negligible over the remainder of the territory.

In these areas the warm weather was conducive to the rapid germination of cottonseed and appearance of cotton shoots in fields with sufficiently high moisture levels. In the southern rayons of Surkhandarinskaya and Kurgen-Tyubinskaya oblasts the first true leaf appeared on cotton plants. Conditions for the growth of the plants were good, although they deteriorated slightly at the end of the period owing to a drop in temperatures.

In the central Asian republics ovaries have formed on fruit crops. The development of the first leaves continues on grapevines and in places inflorescences have appeared. In Chimkentskaya Oblast apply, pear and plum trees have begun to blossom; in Alma-Atinskaya and Taldy-Kurganskaya oblasts fruit crops and grapevines are coming into bud and developing their fruit leaves almost a week earlier than seasonal averages.

In southern Turkmenia and Tadzhikistan winter wheat is in flower, while it is still at the stem growth stage over the rest of the territory.

Alfalfa has formed a good stand, reaching a height of 40-55cm, and in places 60-70cm. In Maryyskaya Oblast inflorescences are still forming. In Kirgizia the height of alfalfa varies from 10-15 to 30cm.

CSO: 1824

CORN SEED WATER-PROOFED FOR PLANTING WHEN COLD

Minsk SEL'SKAYA GAZETA in Russian 2 Apr 80 p 1

[Article by Belorussian Telegraph Agency Correspondent: "They Made Friends With the Corn"]

[Text] Not awaiting the usual soil warmup, the farms of Grodnenskaya Oblast can now begin corn planting. Water-proofed seeds will be used to this end for the first time. Their preparation, i.e., their treatment with a special solution which forms a film to protect them from pests and pathogens is applied at two interregional centers. It has been planned to water-proof as much seed as is necessary to plant an area of 15-16,000 hectares before the start of field operations. Such seeds can lay in the unwarmed soil until the onset of warmth and they guarantee a substantial addition to the harvest.

Almost 25,000 hectares of the most fertile soil (twice as much as last year) is presently allocated for corn in Grodno Province. Since autumn, most of the fields have been fertilized with full quantities of organic and mineral fertilizers in order to increase the harvest of green mass for silage. It has been planned to use mainly early and medium ripening varieties and to employ a wide-row planting method following the experience of the "Rodina" kolkhoz in Ostrovetskiy Rayon which last year produced 485 quintals of corn mass per hectare on the average. Mixed planting will also be practiced, along with planting of this crop by itself.

The specialized units will insure complete mechanization of the operations for its cultivation and harvest.

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CSO: 1824

RESOLUTIONS ON SPRING PLANTING IN BELORUSSIA REPORTED

Minsk SEL'SKAYA GAZETA in Russian 6 Apr 80 p 1

[Article: "On Certain Questions of the Spring Planting: In the Central Committee of the Communist Party of Belorussia and the BSSR Council of Ministers"]

[Text] The Central Committee of the Communist Party of Belorussia and the BSSR Council of Ministers note that significant work has been done by the Party, Soviet and Agricultural bodies, kolkhozes and sovkhozes of the republic in preparing supplies, equipment and personnel for the spring planting. All of the kolkhozes and sovkhozes have been supplied with high-quality spring grain-crop seed. More organic fertilizer than last year has been readied and transported to the fields, and acid soils have been limed. Equipment repair is practically completed. Everywhere training of team workers, equipment operators, sowers and other workers for mastery of advanced methods for producing high-yield harvests has been carried out.

At the same time, the overall level of organizational-operational and political-education work at the kolkhozes and sovkhozes in connection with the imminent spring planting still does not correspond to those responsible tasks and increased requirements which are stemming from the high socialist pledges which have been made and the peculiarities of this year's spring.

In an adopted decree, the Central Committee of the Communist Party of Belorussia, and the BSSR Council of Ministers obliged the BSSR Ministry of Agriculture, the BSSR State Committee of the Agricultural Equipment Association, the BSSR Ministry of Procurement, Belsel'khozkhimiya, the BSSR State Committee for Provision of Petroleum Products, the obkoms, gorkoms, and raykoms of the Communist Party of Belorussia, the oblispolkoms and rayispolkoms, the primary party organizations, and the managers of farms to make timely inspections of winter grain-crop sowing, to carry out the necessary measures for tending them and to replant with spring grain crops sections which are too thin or which have died out.

It is necessary to carry out spring planting of all crops in optimum periods of time and at the high agrotechnical level which guarantees the satisfaction of socialist commitments to the state for the production and sale of grain as well as buckwheat, flax fibre, vegetables, potatoes, sugar beets and other plant growing products.

Taking the lateness of spring and the possible negligible rainfall in April into account, it is necessary to take active measures for highly efficient use of all of the technological and labor resources during application of organic and mineral fertilizers and the comprehensive working of the soil with maximum use of multiple machinery units so that spring grain crops may be planted by the earliest time limits, not more than 5-6 calendar days; flax, sugar beets and feed root crops in 3-4 days and potato planting in 8-10 days.

This year the obkoms, gorkoms and raykoms of the Communist Party of Belorussia, the oblispolkoms and rayispolkoms, the BSSR Ministry of Agriculture, the BSSR State Committee of the Agricultural Equipment Association and their offices in the oblasts, the party organizations and kolkhoz and sovkolkhoz managers should insure an incomparably higher level of agricultural management at all stages in the struggle for the harvest. To this end, they must fundamentally and comprehensively consider the lessons and the conclusions from work in previous years and bring all of the factors insuring the production of the planned yield and gross harvest of grain and other crops into play to the full extent in the concluding year of the five-year plan.

On the basis of the experience of the equipment operators from Ipatovskiy Rayon, Stavropol'skiy Kray and a number of rayons in the Republic, the BSSR Ministry of Agriculture, the BSSR State Committee of the Agricultural Equipment Association, the obkoms, gorkoms and raykoms of the Communist Party of Belorussia, the oblispolkoms and rayispolkoms should insure the recruitment of mechanized units in teams from each kolkhoz and sovkhoz and organize their flow-type team operation. It is everywhere necessary to specify 24-hour equipment maintenance for all of the soil-working and sowing units by specialized mobile brigades and teams from BSSR State Committee of the Agricultural Equipment Association and of the kolkhozes and sovkhozes. They must also provide for the organization of fuel supply as well as medical care for the equipment operators right in the field.

It is proposed that the BSSR State Committee for Provision of Petroleum Products, the BSSR State Committee of the Agricultural Equipment Association, the BSSR Ministry of Agriculture, the BSSR Ministry of Land Improvement and Water Resources, Glavpoles'yevodstroy [Main Administration for Water Resources Construction in the Poles'ye Region] and the oblispolkoms and their bodies in the provinces take exhaustive measures to increase the delivery of fuel and libricants to the kolkhozes and sovkhozes and to create reserves of petroleum products on each farm in quantities insuring continuous operation of the farm machinery and tractor fleet.

It is necessary to institute strictest control over consumption of fuel and lubricants on the kolkhozes, sovkhozes and other agricultural enterprises and the observance of regulations for transportation and storage of petroleum products on farms and refuelling of machinery; over consumption of fuel and lubricants should not be permitted.

It has been recommended that the BSSR Ministry of Agriculture, the BSSR State Committee of the Agricultural Equipment Association, the obkoms, gorkoms and raykoms of the Communist Party of Belorussia, the oblispolkoms and rayispolkoms solve the question of recruiting the necessary number of supplementary equipment operators from industrial enterprises and organizations in other sectors of the national economy in accordance with the decree of the CPSU Central Committee and the USSR Council of Ministers of 10 January 1980 (Point 11 of the Decree of the BSSR Council of Ministers of 28 January 1980). It is necessary to determine the measures of moral and material incentive for the indicated equipment operators at spring planting and to insure the timely solution of all the questions of their everyday life and work on the kolkhozes and sovkhozes.

The obkoms, gorkoms and raykoms of the Communist Party of Belorussia and the primary party organizations are obligated to concentrate the practical activity of the agitation and propaganda cadres and the active membership and the news for mass information on broad-based propaganda, convincing explanation and bringing the requirements and the problems ariving from the decree of the CPSU Central Committee and the USSR Council of Minister's Decree "On the Supplementary Measures for Preparing for and Performing Spring Field Operations in 1980" and the decisions of the 20th Plenum of the Central Committee of the Communist Party of Belorussia to the deep consciousness of each participant in the spring planting.

It is necessary everywhere to organize a daily summing up of the socialist competition of the farms, brigades, teams and crews of the planting equipment and the individual equipment operators in the fields and to insure the systematic and operational interpretation of the course of the competition and the dissemination of progressive work devices and methods and of the best experience of labor organization.

Along with the material stimulation of the labor of the grain farmers, it is necessary to adopt actively diverse forms of moral incentives for the leading workers, to make a theoretical evaluation of shortcomings and oversights and to react sharply and without delay to facts of mismanagement, lack of discipline and poor organization.

The editors of the republic, oblast, association and rayon newspapers and the BSSR State Committee for Television and Radio Broadcasting have been commissioned to broadly cover the work of party, soviet, and agricultural offices in carrying out spring planting, to disclose the experience of the foremost workers and innovators of the planting season in a qualified way and to support creative initiative and business-like proposals and starts energetically. The editors of the newspapers ZVYAZDA, SOVETSKAYA BELORUSSIYA, SEL'SKAYA GAZETA, CHYRVONAYA ZMENA, ZNAMYA YUNOSTI and the oblast newspapers, as well as television and radio, have been commissioned to create visiting groups of journalists as well as information headquarters and press centers in each region to provide broad publicity of the competition and to carry out surprise inspections of the quality of spring field operations and the practical use of the recommendations of science and foremost experience.

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CSO: 1824

INSTRUCTIONS, ADVICE ON SPRING FIELD WORK IN LITHUANIA

Vil'nyus SOVETSKAYA LITVA in Russian 5 Apr 80 p 1

[Interview with Doctor of Agricultural Sciences Antanas Tindzhyulis, Lithuanian Agricultural Institute by correspondent I. Bagdanskis: "Spring Is Calling to the Fields"]

> [Text] With the increase in temperatures, the snow is melting rapidly everywhere. In many places large areas of tilth and winter crops are already free from it. What is the main thing now, to what phases of work should the managers and farm specialists dispatch people these days? Ionas Bagdanskis, Lithuanian Telegraph Agency correspondent, about this with a department head of the Lithuanian Agricultural Institute, Antanas Tindzhyulis, doctor of agricultural sciences.

[Question] Last fall, many winter crops were sown. What is their status now?

[Answer] "Finally a year has come," said Antanas Tindzhyulis, "when we may again count on a good winter crop harvest, since the seeds passed the winter well everywhere. However, with the intense snow melting, water is collecting in low places in winter crop and perennial grass fields. If it remains there longer, we will lose a part of the harvest; the winter crops and clover in these places will get soaked and they will be thinned out or will die. Then, the large areas of dead crops will have to be resown. Therefore, it is necessary to send people to the fields, not delaying even one day, to drain the water. This must also be done on the tilth so that the fields which have been prepared for spring planting might dry out uniformly."

[Question] Spring application of fertilizers has a great effect on the harvest of all crops. How is this work organized?

[Answer] First of all, it is necessary to check the mineral fertilizer at storehouses. On certain farms a part of the fertilizer is stored in barns, in sheds and in other unsuitable places. There is a danger that they may be flooded by waters from melted snow. Fertilizers which have gotten wet lose a part of the nutritive substances necessary to the plants. If it is pressed into lumps, it is necessary to waste time breaking it up, and if poorly granulated fertilizers are applied to the soil, a smaller harvest will be produced.

Since the soil did not freeze deeply and the meteorologists are promising a warm and sunny April, it may be that the spring flood waters will already have receded in a week and the winter crop vegetation will be renewed early. It is now the case that in a day or two it will be necessary to start giving them nitrogen supplements. Ammonium nitrate and urea are best suited for this, and where the perennial grasses and pasture lands remained unfertilized with phosphorus and potassium since autumn, it is immediately necessary to perform this crop dressing. Just as soon as the grass is sprouted in the cultivated meadows, it will be urgently necessary to supply a nitrogen top dressing to the areas intended for the first pasturing. Naturally, it is difficult to go out into the fields with ordinary equipment now. Therefore, it is necessary to use all the capabilities of agricultural aviation.

It is very important to use organic fertilizers better. In the spring, manure should be applied only where corn is going to be growing and, so as not to be late with potato planting, one should deliver manure only to lighter soil areas which have been allocated for them. In the fields allocated to sugar beets and other root crops, it is not worthwhile to bring out the manure but apparently we will not succeed in bringing it out. Therefore, it will be necessary to deliver more of it to occupied fallow fields and clover fields where winter crops will be planted in the fall.

[Question] Planting schedules have already been set up on the farms. To what should particular attention be paid when carrying out the programs for the first stage of operations?

[Answer] In the time remaining until the start of planting, it is necessary to test the equipment and eliminate all of the malfunctions. This year's conditions require this since spring is so late in coming. The sowers and equipment for applying ammonium hydroxide must be particularly carefully prepared. To my way of thinking, it is very important co conjoin the basic and the auxiliary operations. For example, if it is planned to sow 100 hectares in a day, it is necessary to concern oneself not only with the working of the soil, the equipment for applying fertilizer and planting, and the allotment of people. It is also necessary to deliver the necessary amount of seeds and granulated super phosphates to the field on time and to dispatch a tractor there with which it will be possible to cultivate the berms and other places which are accessible to wide-span equipment only with difficulty. No matter how well these plans are drawn up, you will have to correct them to take into consideration weather conditions.

Spring planting time always depends on the state of the soil. The harvest will be poorer if one cultivates waterlogged soil. It is also reduced when dry soil is cultivated. Therefore, the agronomists should follow its status very carefully. However, as soon as it is possible to begin planting, one must not delay this work even a minute. Planting must be performed rapidly and in a high quality fashion.

I want to turn our attention to the fact that the weather conditions for recent years have caused considerable confusion in crop rotations, and therefore we should now firmly know not only what and where we are going to plant in the spring, but also how large of an area will be planted in a winter crop in the fall. It is necessary to choose the predecessors of individual crops correctly and bring their alternation and crop rotations to order.

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PLANTING SCHEDULE CUT BACK IN GOMEL'

Minsk SEL'SKAYA GAZETA in Russian 3 Apr 80 p 1

[Article by Belorussian Telegraph Agency correspondent: "Planting Following a Reduced Schedule"]

[Text] The protracted winter forced rural workers in Gomel'skaya Oblast to reexamine the schedules for carrying out spring planting which had been formulated earlier. A course has been set for the sharp reduction of work deadlines as a result of the use of wide-span equipment. About 360 chains of 3 sowers each will be brought out onto the fields for the first time. Almost two and a half times as many wide-span units for "T-150" and "K-700" tractors and multiple attachments for levelling soil have been readied as last year, and twice as many units for applying ammonium hydroxide. Much has been done toward mechanization of operations guaranteeing the planting. Sower and potato planter loaders will be widely used on all farms. Adjustment of the agriculture machinery is being completed. The equipment operators who are faced with working with the wide-span units have undergone special training.

It has been planned to carry out planting of the early grain crops in the oblast in 5-6 working days.

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CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

SOWING DELAYED, FIELD PREPARATIONS UNDERWAY AROUND STAVROPOL

Moscow IZVESTIYA in Russian 4 Apr 80 p 1

[Article by V. Oliyanchuyk, IZVESTIYA correspondent, Stavropol'skiy Kray]

[Excerpts] Nikolay Timofeyevich Vil'gotskiy, first secretary of Kochubeyevskiy Rayon, considers that complexes which are being organized on all of the rayon's farms are developing as the Ipatovtsy recommended. The harvesting-transport complex designed for all field-crop operations, but only for the cultivation of any one crop which is labor intensive and extremely important for the farm, has been made permanent.

The workers of the Kochubeyevskiy Rayon are performing field operations in an organized manner; early cereal crop planting has been finished everywhere, and beet growers and corn growers will bring their sowing equipment into the fields any time now. Meanwhile, the farms in the remaining rayons around Stavropol have begun work later than usual because of the extended winter and the extreme cold spells which held on literally until the last days of March. This compelled all of the farmers to work the fields and carry out seeding at faster speeds.

Spring field operations are gathering force in the center, in the north, and the east of the Kray. The Stavropol'tsy have assuredly begun the task for Harvest-80, the harvest for the concluding year of the five-year plan.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

SPRING WORK IN TRANSCARPATHIA--In Transcarpathia this spring warm sunny days have alternated with rainy ones. The land has already warmed up. On some stretches the soil has become ready--the grain growers are hurrying in order to not miss the optimum sowing dates. The spring field work front is expanding with every day. [Excerpts] [Kiev SIL'S'KI VISTI in Ukrainian 5 Apr 80 p 1]

SPRING WORK IN CRIMEA--Grain growers in Crimea are working under adverse weather conditions this year. And in spite of this field work is going forth all across the peninsula. They are utilizing every hour of fair weather to prepare the soil for row crops and at the same time sow spring crops. From Tarkhankut to Kerch the steppe is coming alive. [Excerpts] [Kiev SIL'S'KI VISTI in Ukrainian 18 Apr 80 p 1]

LATE SPRING IN UKRAINE--The late, capricious spring is forcing the grain growers to make significant adjustments in the work plan. The object is to make highly effective use of each hour of fair weather, to do their sowing within the optimum sowing dates. [Excerpts] [Kiev SIL'S'KI VISTI in Ukrainian 27 Apr 80 p 1]

PLANTING BY AIR--Brest--At the same time that they are top dressing the winter crops and grasses, the oblast's aviators have begum to spread phosphorus-potassium fertilizers over the dried out peat bogs allocated for winter grain crops. It has been planned to plant barley and oats by air following the experience of past years over the large area of such land where it is difficult for equipment to move in the spring. The collective of the Brestskiy aviation enterprise is presently working more than 300,000 hectares of field, meadows and pasture lands--much more than last year. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 11 Apr 80 p 1]
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SPRING FIELD WORK--In Transcarpathia this spring warm sunny days have alternated with rainy ones. The land has already warmed up. On some stretches the soil has become ready--the grain growers are hurrying in order to not miss the optimum sowing dates. The spring field work front is expanding with every day. [Excerpts] [Kiev SIL'S'KI VISTI in Ukrainian 5 Apr 80 p 1]

CORN PLANTING--Tashkent, 27 March (Tass)--The warm March sun has dried the irrigated fields in Tashkentskaya Oblast, and today the machine operators brought sowing equipment out into them. This year corn growing will be a particularly wide development here. This is associated with the commitments of the livestock breeders in the oblast to increase production of meat, milk and other products sharply. The oblast's farmers decided to increase production of the "amber grain" this year to 146,000 tons; this is almost 50,000 tons more than last year. Such a large increase in production will be achieved by developing unproductive land and by increasing the yield from each hectare. [Text] [Moscow TRUD in Russian 28 Mar 1] 9194

FERTILIZER APPLICATION--Minsk--The organic fertilizers for the spring crops on the kolkhozes and sovkhozes of Belorussia have been prepared a month ahead of schedule. More than 50 million tons of compost (about 90 percent) has already been transported to the fields. The abundant dressing (20 tons of organic matter per hectare) will permit us to produce up to 32 quintals of grain from it. The experience of the foremost kolkhozes, which harvested 40 quintals of grain per hectare last year in spite of a drought is being used. [Text] [Moscow TRUD in Russian 16 Mar 80 p 1] 9194

CSO: 1824

LIVESTOCK FEED PROCUREMENT

UKRAINIAN LIVESTOCK FEED EFFORTS NOTED

[Editorial Report] In Kiev SIL'S'KI VISTI in Ukrainian 24 Apr 80 p 2, an article by V. Kalyta reports on the work of the Ukrainian Scientific Research Institute of Irrigated Crop Farming. The article reports that workers at the institute got 1,606 quintals of green mass per hectare, which contained 243.5 quintals of feed units and 29.3 quintals of digestible protein.

A 500 word article on 4 Apr 80 p 2 by M. Korobko and N. Dovhan' appearing in early April turns its attention to ferment additives for livestock rations. The article begins by making the point that nearly 30 percent of the nutrient matter in feed is not assimilated by the livestock. This is explained first and foremost by the incomplete digestion thereof. Ferment preparations are recommended to stimulate digestion.

"In specificity of effect they are identical with grass ferments, however, they break down plant proteins better, contain a complex of materials which break down cellulose and other complex hydro carbons in plant feeds. These ferments are not synthesized by the animal."

The remainder of the article is devoted to the production and preservation of ferment preparations.

A short article on 23 Mar 80 p 2 by S. Tsan'ko in late March praises those farms in Poltavskaya Oblast which made the most of the means on hand in the livestock feed program. Those farms which had no feed shops or feed kitchens in which to steam and mix straw with various components turned to the use of 10 cubic meter cisterns. The article reports that expenditures for the new equipment were minimal, the benefit there from was great and livestock productivity went up, in spite of the feed shortage.

An article on 10 Apr 80 p 2 from Poltavskaya Oblast expands the scope considerably. The 1,400 word article by M. Kolyada and S. Tsan'ko reports from a local VASKhNIL conference on livestock feed. A significant part of the article is devoted to Poltavskaya Oblast's efforts to improve its feed situation through land reclamation efforts and expansion of hectarage devoted to various feed crops.

"Meadows and pastures in the oblast supply only 14 percent of the feed although they could and should do significantly more."

Also worth noting are remarks by the director of the Scientific Research Institute of Crop Farming and Animal Husbandry for the Western Regions of the Ukraine, corresponding member of VASKhNIL, Doctor F. Yu. Palfiy.

"The lack of coarse and succulent feeds on the farms is one of the reasons for low livestock productivity and the over expenditure of grain forage. Each enterprise should strive to see that they get as much high protein feed per hectare as possible."

CSO: 1811

INSPECTION TEAM REVIEWS FEED PROGRAM DURING WINTER PERIOD IN THE UKRAINE

Kiev PRAVDA UKRAINY in Russian 27 Feb 80 p 2

[Article by members of PRAVDA UKRAINY inspection team: "Experience Evaluated By Repetition"]

[Text] The cattle wintering period moved into its second half. And this, as is well known, is the most difficult period for the livestock farms. Today a zealous master, in addition to protecting each kilogram of feed, also ponders the best means for multiplying the return from it. And here the skilful use of leading experience, literally each and every grain of it, is of great assistance to the livestock breeders. Moreover, it should be noted that in those areas where a thrifty attitude prevails in carrying out this work, experience is introduced into operations without delay. An example of this is the fact that the Kiev livestock breeders are successfully employing the barothermal method for processing straw, although it was only recently that it was introduced into the republic. This new innovation is also being used in the Crimea and in Nizhnegorskiy Rayon.

Unfortunately, we are unable to boast about the existence in all areas of such an attitude towards leading experience. Here is what those who participated in our regular inspection of livestock wintering operations had to say.

Did They Forget What They Knew?

An oblast seminar on the raising of heifers was held at the Zaporozhets' Kolkhoz in Orekhovskiy Rayon of Zaporozhskaya Oblast. It can be stated at once that there was definitely something to display and something to learn here. The oblast's livestock breeders returned from Orekhovskiy Rayon with notebooks full of useful entries. A large amount of the Orekhovskiy Rayon experience is already being employed on a number of farms.

One could only rejoice, despite the fact that his mood would deteriorate upon greater acquaintance with the "fly in the ointment." During this same seminar, emphasis was placed upon the fact that concentrated feeds must be fed to animals in the form of mash. As is well known, the technology for preparing mash is simple. Nor does anyone question the importance attached to the correct preparation of the feed. Nevertheless, at this same farm where the seminar was conducted -- the Zaporozhets' Kolkhoz -- the concentrates were fed to calves in dry form.

"Forgetful" people are also working at the Za Mir Kolkhoz in Sinel'nikovskiy Rayon in Denpropetrovskaya Oblast. This farm -- a spetskhoz [specialized farm] for the raising of heifers -- in 1978 became one of the winners of a republic competition for livestock breeders. At the present time, the kolkhoz workers appear to recall the recent past and are envious of themselves. Actually, they sold full-weight heifers at that time and the livestock breeders could not be praised enough: each first heifer, even during the first year, furnished more than 3,000 kilograms of milk.

But the very next year after the farm was awarded a prize, it began to fall behind. The weight gains decreased by almost twofold. As a result, the animals were held over for three and then finally for four months.

What was the reason for this? Let us try to understand this problem "from the beginning." A simple example. To maintain the schedules for feed consumption during the wintering period in a firm manner -- this is truly one of the rudiments of farm production. This was also done formerly at the Za Mir Kolkhoz. Today these schedules are being observed only in the form of a "half-way measure."

The winter this year has been cold and this has also adversely affected the weight increases. However, the difficulties are being successfully overcome on the leading farms. However, at the Za Mir Kolkhoz, no solution has as yet been found for the problem of installing heat generators, in keeping with the example set at other farms. Yes and even straw bedding is lacking in the facilities. Nevertheless, it is here that the future dairy herd is to be developed.

"The principal cause of the low weight increases is a shortage of feed" explained N.I. Zuzik, the kolkhoz chairman, who only recently assumed the position.

Alas, the mentioned facts are quite clear: and yet feed is not the only problem.

Our inspection teams commented upon the fact that all too often references are being made today to feed shortages. All problems are being explained on the basis of a "difficult year." Such was the opinion expressed at the Yelenovskiy Sovkhoz in Mar'inskiy Rayon in Donetskaya Oblast. Here the average daily weight increases in the young stock did not exceed 280 grams.

What was the problem? Was there no feed for the livestock? Nothing of the sort -- at the Oktyabr' Kolkhoz in this same rayon, the same amount of feed was available per head of livestock. The only difference was that each gram of feed was employed in a profitable manner on the Oktyabr' farms, owing to the fact that here -- in the delivery department, the veterinary dispensary for calves and in the facilities having group machines -- ideal conditions had been created for raising healthy and productive animals. It bears mentioning that Mar'inskiy Rayon is one of the oblast's leading rayons for animal husbandry and especially for milk production. Last year, 2,900 kilograms of output were obtained from each cow here and, at the present time, more than 7 kilograms of milk daily. These results derive mainly from the work performed by the livestock breeders at the Oktyabr' Kolkhoz.

Thus, with the same amount of feed available, the Oktyabr' Kolkhoz is presently obtaining weight increases which are almost twice as great as those being obtained at the Yelenovskiy Sovkhoz. As the saying goes, the causes of this situation are clearly visible to the untrained eye. At the Yelenovskiy Sovkhoz, proper thought was not given on a timely basis to the arrangements required for the replacement young stock. Generally speaking, there is no delivery department. No exercise is provided for the animals. During ordinary years, all failings are somehow concealed and weight gains raised "to the norm" -- an additional wagon of hay, an extra box of mash. But the situation is different today. Each problem is now apparent.

Moreover, There Were Seminars...

It is obvious that considerable losses are occurring at this same Za Mir Kolkhoz in Dnepropetrovskiy Rayon, during this month of February, owing to the fact that they are proceeding all too slowly and failing to convert over to a system of loose maintenance for its heifers. Yet a seminar was conducted on this subject more than a year ago in the oblast. The livestock breeders from the Kolkhoz imeni Lenin in Krinichanskiy Rayon provided a very convincing demonstration of the advantages to be realized from this method. The method is generally well known. We will mention only that the animals are distributed by groups according to their age and weight characteristics. This makes it possible to mechanize the feed distribution process to a maximum degree (a feed preparation shop with a capability of 120 tons daily is in operation at the Kolkhoz imeni Lenin). The problems concerned with cleaning and heating the facilities are solved much more easily. Many farms throughout the oblast are employing this valuable experience. But the Za Mir Kolkhoz is proceeding in a very slow manner.

Unfortunately, this example is by no means singular in nature. Let us look at Zaporozhskaya Oblast. Concern is displayed here for disseminating leading experience. Last year alone, five oblast and 18 rayon seminars were conducted for the livestock breeders. Approximately 5,000 individuals participated in them. And it should be stated that many of them acquired liberal amounts of useful experience.

The chief of a heifer raising complex at the Kolkhoz imeni Vatutin in Vasil'yevskiy Rayon, Ye. V. Gladkovskaya, stated in a not too confident manner:

"At the Ukraina Kolkhoz in Primorskiy Rayon, we liked the pasture areas and at the Zaporozhets' Kolkhoz in Orekhovskiy Rayon -- the manner in which the competition was organized. We are gradually introducing these same developments..."

Such lack of confidence on the part of a specialist is understandable when one reviews the operational results of the complex. During January and February the weight increase per head of cattle amounted to 316 grams daily. Truly, this is nothing to boast about. And once again -- the cause is not simply a matter of insufficient feed supply.

The calves at the complex feel the cold weather -- the concrete floors are not suitable for our winters. In some buildings, boards have been spread out on the concrete (following the example set in Primorskiy Rayon). In these areas the cattle weight increases are higher -- by 100-120 grams. But nothing has been done with regard to the remaining facilities. Considering the present level of farm mechanization, the personnel must be trained in advance and in a thorough manner. A worker at the complex must master the equipment to perfection. But at the Kolkhoz imeni Vatutin, they began training the machine operators only after the complex's building had been placed in operation. And the result was immediately apparent. It was impossible to see, without difficulty, the tremendous frozen "cake" of mixed feed -- it formed around the storehouse, because the workers here were not skilled in the operation of the new mechanisms. It came as no surprise to learn that 2,900 head of cattle at the complex of the Kolkhoz imeni Vatutin, representing all age groups, lag behind in their growth by roughly 30 kilograms.

No Two Feeds Are Alike

Very stern measures should be applied against those who ignore the valuable experience that has accumulated in the field of feed enrichment. The leading farms are aware of the importance of such work: by enriching the rations with protein additives and microelements, it is possible to raise the productivity of the cattle considerably.

The Podol'ye Sugar Plant is located in Ternopol'skaya Oblast. A shop for enriching molasses with carbamide has been operating successfully here for some time. The collective at the plant does not view the preparation of nutritional feed as an excessive burden. They consider it to be a vital task.

The chief technologist for the plant, G.K. Levandovskaya, participated in our discussion. The enrichment shop is one of her principal concerns.

"This is a very important sector" related the specialist, "I do not believe there is any need to explain in detail the benefits which our farms realize from urea. They are familiar to all livestock breeders. Yet all too often a watchful and guarded attitude is adopted with regard to this reserve. By adding carbamide to the molasses, under laboratory control and with plant accuracy, we centralize the feed enrichment process. This also helps to avoid unpleasant eventualities.

In Ternopol'skaya Oblast, this work has been organized, as the saying goes, in grand style. Several years ago the Ternopol'skaya Oblast Executive Committee adopted a special resolution calling for the creation of special molasses processing shops at each of the eight sugar plants -- so as to ensure the issuing of only an enriched form of molasses to the farms. This was a correct decision.

Nevertheless, as the members of the inspection team themselves learned, such valuable experience is still not being employed in all areas in Ternopol'skaya Oblast. For example, the oblast's most powerful sugar plant -- at Chortkov (Director V.A. Selitbovskiy) -- has already been in operation for three seasons. However, it still does not have any enrichment shops.

And Vinnitskaya Oblast, is this the sugar equivalent of our Donets Coal Basin? It would seem that surely here the more experienced sugar refiners and livestock breeders would be the first to embrace new and leading ideas. Who would have thought it possible -- no thought has as yet been given to creating a molasses enrichment shop here.

In Khmel'nitskaya Oblast, our inspection team decided also to visit an "old" source of experience. An important and interesting seminar was at one time conducted here at the Kolkhoz imeni Sverdlov in Krasilovskiy Rayon. The specialists, machine operators and skilled craftsmen at this farm, using available equipment, created two technological lines. One was for the preparation of a nutritious mixture, seasoned with nutrient yeasts, for cows which had already delivered calves. The other technological line was for the preparation of coarse feeds for feeding to the animals, with carbamide and microelements added.

A special laboratory was at the same time created at the farm, in the interest of ensuring that all work was carried out on a scientifically accurate basis.

How is the work proceeding at the present time, considering the fact that there is considerably less coarse and succulent feed and the situation is very difficult with regard to concentrates?

Our inspection team -- is once again at a farm of the Kolkhoz imeni Sverdlov.

"Yes" admitted the head of the farm, O.V. Petrikovskaya, and the chief zootechnician, M.Ye. Kozubey, "It is useful work -- the adding of carbamide and microelements. More output was obtained when they were employed.

One of the kolkhoz's veterinary orderlies, V.I. Boguslavskiy, joined in the discussion.

"What did you say? Today nobody is interested in enriching feed. I went to the Krasilovskiy Rayon veterinary pharmacy in order to obtain microelements and I was informed that none were available and that it was not known when they would be available at the Khmel'nitskaya Oblast Veterinary Technical Supply Office.

Considering all that was accomplished, all that remained was to moisten the syrup -- one half kilogram per cow daily. But this was so little!

True, they gave a demonstration on the operation of the feed preparation shop mechanisms before the inspection team -- in order to show that all is not lost. We would like to believe that this is so. At the present time, the livestock breeders and machine operators at the Kolkhoz imeni Sverdlov must devote a maximum amount of effort if they are to make up for lost time. And this is not easy: the milk yield being obtained from each cow at the kolkhoz is short by 1 kilogram daily.

Unfortunately, the experience accumulated by the Sverdlov workers is not being repeated by any other farm in Krasilovskiy Rayon. And only a few throughout the oblast are following it. This constitutes a direct rebuff to the oblast, rayon and agricultural organs.

> The members of the inspection team of PRAVDA UKRAINY were as follows: S. Petrushko -- chief zootechnician-technologist for beef production of the oblsel'khozupravleniye; A. Smirnov -- chief zootechnician at the Zbarazh Interfarm Enterprise for Beef Production -- Ternopol'skaya Oblast; A. Lysenko -- chief zootechnician for the Mar'inskiy Rayon Agricultural Administration; G. Zhuravka -- head of the Agricultural Department for the newspaper RADYANS'KA DONECHCHINA -- Donetskaya Oblast; V. Pikhzlenko -- secretary of the party committee at the Kolkhoz imeni Lenin in Krinichanskiy Rayon; I. Polegen'kiy -- chief of the Sinel'nikovskiy Rayon Agricultural Administration -- Dnepropetrovskaya Oblast; N. Boyko -- calfmaid at the Zaporozhets' Kolkhoz in Orekhovskiy Rayon; V. Kuznetsov -- chief zootechnician at the Vasil'yevskiy Rayon Agricultural Administration -- Zaporozhskaya Oblast; M. Rybchinskaya -- member of People's Control Group at the Kommunar Kolkhoz in Khmel'nitskiy Rayon -- Khmel'nitskaya Oblast; N. Ladanovskiy, V. Lysenko, A. Pankratov, A. Rekubratskiy, M. Fedik -- correspondents of PRAVDA UKRAINY.

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LIVESTOCK FEED PROCUREMENT

ENRICHMENT OF LIVESTOCK FEED RATIONS IN THE UKRAINE

Moscow PRAVDA in Russian 10 Mar 80 p 2

[Article by A. Okopnyy, Deputy Minister of Agriculture for the Ukrainian SSR: "Enriching the Ration"]

> [Text] During the November (1979) Plenum of the CPSU Central Committee, it was pointed out that one of the causes of slow growth in the production of animal husbandry products is the lack of balance in the feed in terms of protein. Other components are required here. In solving this very important problem, associated as it is with the return being realized from the farms, a great amount of reliance must be placed upon the chemical industry and upon the proper utilization of the achievements of science and practical experience.

The wintering period has always been a difficult one for livestock breeders and this present one has not been an exception. As a result of the summer drought, a number of farms in the Ukraine laid away less forage than was required. The experience of many kolkhozes and sovkhozes has shown that the return from feed increases noticeably if it is enriched using various chemical additives.

I recently visited the Grigorovskiy interkolkhoz complex in Kiyevskaya Oblast, where approximately 3,000 head of cattle are being fattened on beet pulp. Here the livestock breeders are adding a mineral-ammonia preparation to the feed that was created by scientists of the Institute of Biochemistry of the Academy of Sciences for the Ukrainian SSR, in collaboration with other scientific collectives, and they are obtaining good results. The director of the complex, L. Glukhen'kiy, who is a great enthusiast of this new development, stated:

"We have daily weight increases for each male calf of more than a kilogram. Almost all of the animals we ship to meat combines are in a high state of nourishment and their weight -- 410-430 kilograms. We are expending considerably less feed per quintal of meat than formerly, at which time the rations did not include such additives.

It bears mentioning that livestock are usually fattened on pulp for no more than 70 days. If a mineral-ammonia preparation is added to it, the fattening period can be extended to 4 or 5 months. Yes and the daily weight gains increase noticeably.

Under the conditions found in the republic, with large quantities of beets being processed, the use of additives represents an important reserve for increasing the production of meat. At the present time, hundreds of inter-enterprise fattening stations are operating in the vicinity of sugar plants, with more than 600,000 head of cattle being maintained at these stations. Moreover, mineral-ammonia premixes and another preparation -- carboxylin, developed at the same institute -- are producing fine results when added to conventional feeds.

A primary concern is that of how best to organize the production of mineral additives in the volume required. At the present time, they are already in production in a number of oblasts. For example, a specialized department in Ternopol' is furnishing approximately 1,000 tons of output annually. This is sufficient for adding to the rations for 30,000 head of cattle, for a fattening period of 120 days. Departments having such a capability are also to be found in other areas. However, the requirements for carboxylin and the mineral-ammonia preparation are much greater.

Unfortunately, the potential for producing mixtures is still limited: there are shortages of nutritional soda, magnesium sulphate, manganese and zinc. In solving this problem, the Ministry of Chemical Industry could furnish a great amount of assistance to the animal husbandry workers by increasing the production of these products in order to satisfy the agricultural requirements. It is obvious that a special mineral additives plant should be built in the future, since it is difficult to meet the requirements for such additives using the primitive method.

An entire series of other chemical agents, all of which are capable of enriching feeds with nutritional substances, has recently appeared. How can they be employed effectively? As a result of joint efforts by scientists and production workers throughout the republic, a great deal has been accomplished in connection with the use of nitrogenous compounds for compensating for a feed protein deficit in livestock rations. For example, compared to 7-8 years ago when only 3,000 tons of synthetic urea were expended annually for feed purposes, at the present time approximately 170,000 tons are being fed to the animals. For the purpose of training personnel in this work, seminars were organized on the farms of those establishments possessing the primary experience. Thus, as the saying goes, the ice was broken.

Today a majority of the kolkhozes and sovkhozes are convinced regarding the value of carbamide additives. They are being used in feed on many farms, including in silage.

In short, our livestock breeders already possess good experience in the seasoning of feed with carbamide. However, this experience is not being disseminated to the degree desired. One reason for this is the fact that the kolkhozes and sovkhozes obtain urea only as mineral fertilizer. It is received from the chemical enterprises in loose form, without packaging, and at times it is transported and stored with other types of fertilizers considered to be harmful to animals. Thus the farm workers at times are fearful of feeding it to the animals. The carbamide to be used in animal husbandry should be produced in packaged form and particularly that which is used as an additive to feed.

Chemistry in feed production -- here we have in mind microelements, the inclusion of which makes it possible to balance the rations to a better degree and raise their value. However, the requirements of the farms for such preparations are being satisfied by only 20 percent. And indeed a shortage of microelements is equivalent to a loss of protein. In solving these problems, the livestock breeders are pinning their hopes on receiving assistance from the Soyuzsel'khozkhimiya Association.

An equally important reserve for raising the quality of feed is its chemical preservation. According to the degree of preservation of nutrients, it occupies second place following the artificial drying of grasses. The use of preservatives during the laying in of silage is producing fine results. Indeed, under the usual conditions and owing to a poor supply of substantial silage installations for the farms and shortages of polyethylene film, this feed is often of low quality when received; the nutrient losses, including protein, reach 20 percent. But when conserved, their preservation is raised by 2-3 times.

The livestock breeders in a majority of the oblasts are creatively searching for methods for enriching their rations. For example, at interkolkhoz combines created in Chernovitskaya Oblast for the production of feed, chemical additives are being introduced in a skilful manner thus raising the nutritional value of the mixtures. It is by no means an accident that the farms in this area record the highest weight increases in their animals. In Vinnitskaya Oblast the mixed feed plants are attached to interenterprise facilities for the fattening of cattle. They produce complete-ration granules containing carbamide, mineral-ammonia additives and microelements. The experience of livestock breeders in Kiyevskaya and Chernigovskaya oblasts is rather instructive. At the same time, on a number of farms in Nikolayevskaya, Sumskaya and some other oblasts, the agricultural specialists and farm workers are devoting very little attention to the use of chemical processes in feed production and are failing to display proper initiative. It is obvious that success is being achieved in those areas where the chemical service is well established in animal husbandry. This is a new type of endeavor requiring special concern. Today there are zonal laboratories operating in each oblast in connection with the use of chemical processes in feed production. As a rule, they have been organized in the vicinity of oblast experimental stations and are responsible for supervising the introduction of new innovations and summarizing experience. Laboratories are also available at all of the animal husbandry complexes and on many farms. Their specialists, taking into account the analytic data, furnish assistance in composing the feeding rations and monitor the correct utilization of chemical additives. But it must be confessed that many of the laboratories are not performing in the manner intended. There are only a few good laboratories in Kirovogradskaya, Rovenskaya and Volynskaya oblasts. On a number of farms throughout the republic, they are for the most part inactive owing to a shortage of experienced chemists and laboratory workers. In the interest of correcting the situation, our ministry organized training courses for them at scientific-research institutes, experimental stations and zonal chemical laboratories. On a majority of the farms, it is still not possible to open laboratories for another reason: no equipment or apparatus is available for performing analysis or producing generalizations. This important problem should be the object of attention by Gosplan, Gossnab and the USSR Ministry of Agriculture.

Today, all specialists working in animal husbandry require a thorough knowledge of chemistry. The VUZ's should provide the future zootechnicians with a better understanding of this subject, in conformity with the needs of the branch. At the present time, there is a gap in the knowledge possessed by the young specialists in this regard.

The skilful use of the achievements of chemistry when processing and preparing forage will enable the farm workers to cope better with the wintering of the livestock and to increase their production of meat, milk and other products.

7026
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FOOD SCRAPS FOR LIVESTOCK INADEQUATELY USED IN RIGA

Riga SOVETSKAYA LATVIYA in Russian 17 Feb 80 p 2

[Article: "Food Scraps--To Work: A Sharp Signal"]

[Text] As before, food scraps are being poorly used to feed cattle. This concerns Riga in particular.

S. Lasminas, for example, reports that food scraps are not hauled away from the territory of ZhER's [not further identified] Numbers 75, 78, 79, 80, 81 and 84, Proletarskiy Rayon of Riga for a month at a time or more. Containers for them are overflowing. Yard keepers are compelled to remove buckets for scrap collection from stairway landings and the residents are throwing food scraps into trash bins. At least 30 tons of such cattle feed have accumulated on the territory of ZhER's.

Members of the housing council of Building Number 35 on Revolutsiyas Street write to the editors that the situation is also no better in the Kirovskiy Rayon of Riga. Food scraps are not removed here from the area around the ZhER's nor from the yards of public catering enterprises and school cafeterias as well.

Food scraps from Riga should be delivered to the suburban sovkhoz "Ulbroka," where pigs are fattened. There are special installations for preparing high-quality feeds from the scraps by a heat treatment at this farm. Right now food scraps are frequently gathered by livestock owners on subsidiary farms located in the suburbs, who have no capability of processing them correctly.

The short supply of truck transport is the main cause for the untimely delivery of this valuable raw material for producing feeds. The special motor transport enterprise of the Riga Gorispolkom does not allocate enough container carriers to this end, counting on a shortage of them. The schedules for them going out on their routes are frequently disrupted, but a way out must be found. On frosty days in particular, such a cargo may be transported in ordinary curb-side equipment.

Food scraps are an important aid for strengthening the feed base. The Riga Gorispolkom should urgently take the necessary steps for their timely removal. Soon the thaws will begin and food scraps will spoil, a fact which can seriously reflect on the sanitary condition of the city.

9194
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LIVESTOCK FEED PROCUREMENT

FOOD SCRAP COLLECTION PROBLEMS IN OREL AREA

Moscow PRAVDA in Russian 4 Apr 80 p 1

[Article by E. Dorofeyev, head of the division of ORLOVSKAYA PRAVDA and N. Utkin, PRAVDA correspondent: "Using Cheap Feeds"]

[Text] The subsidiary farm of the cafeteria trust is making an even greater contribution to the improvement of public catering to residents of Orel. Last year it produced several hundred tons of pork. Let us note that the animals were fed primarily on food scraps delivered to the farms from the city. This fact itself attests to the fact that regular collection of the scraps in the residential sections of the city and in working villages, at cafeterias, nurseries, hospitals and schools, wherever they are, is necessary.

Unfortunately, not everything is undertaken in this city so that such an important reserve is used with total efficiency. Last year the food-scrap procurement plan was essentially disrupted in a number of rayons.

"It is possible to change the situation for the better," said I. Timokhin, chairman of the Ispolkom of the municipal council at one of the sessions, "through the total efforts of workers, housing and municipal services, specialized service stations and food scrap collection offices. All of the conditions exist in the city for auxiliary farms to receive no less than 25 tons of feed daily."

A specific task has been set, and how is it being executed?

We visited the trust's subsidiary farm to get an answer to this question. Its director, A. Perepelova, took the accounts book.

"Judge for yourselves," she said, "in January, 254 tons of scraps were delivered in all, or one third as much as there should have been. In February there were also irregularities: Sometimes they'll bring 16 tons per day, sometimes half as much, and it's really bad on Saturday and Sunday. The gorispolkom's directive that the truckers should work on a sliding schedule is not being followed. It is impossible to achieve the necessary weight increases under such conditions."

One wants to believe that the Orel Gorispolkom can achieve a sudden change for the better. But there is yet another side to the question. We are speaking of the collection of food scraps at cafeterias, schools, hospitals and nurseries. The oblast public catering administration is responsible for this sector of the work. It achieved a certain increase in feed collection in comparison with 1978, but there is still an untouched area of concern here.

The whole snag is in the short supply of transport. Is it really possible to go around to all the points in the city using just the two trucks which the oblast administration has at its disposal? The picture is the same in Livny, Mtsensk and other inhabited points. Who should help out here? It appears that, first of all, it is the RSSR Ministry of Trade. Internal resources must be better used.

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LIVESTOCK FEED PROCUREMENT

FOOD SCRAPS USED FOR FEED IN BELORUSSIA

Minsk SEL'SKAYA GAZETA in Russian 1 Apr 80 p 2

[Article by Z. Gil'man, department head, Belorussian Scientific-Research Institute of Animal Husbandry, doctor of agricultural sciences, professor, member of the public council of SEL'SKAYA GAZETA for propagandizing the achievements of science and foremost experience and E. Kovalenok, senior research associate at the Belorussian Scientific-Research Institute of Animal Husbandry and candidate in economic sciences: "Food Wastes--To Work?"]

[Text] Food scraps are a large supplemental source of feed for swine. Last year, for example, about 150,000 tons of them were collected. This is 300,000 quintals of feed units. Presently, the supply of food scraps food scraps in just Minskaya Oblast for the first quarter has increased by 11 percent. Work in the other oblasts of the Republic has also improved significantly. Now, more than 130 farms are using such feed on their swine farms.

Here is a concrete example. At the swine raising complex "Vyuzhnyy," Gomel'skiy Rayon, about 15,000 tons of scraps are used annually. Feed pigs weighing up to 50 kg are given 2.5 kg of these scraps, the same amount of combined feed of the simplest recipe, 50 g of grass flour and 75 g of feed lysine on the average. In the start of the second fattening period, the norm of scraps for pigs with a high live weight is increased to 3.5 kg and at the end to 4.5 kg. In a word, more than 15 percent of the grain feeds necessary for fattening livestock are replaced by the scraps on this farm.

About 5,000 tons of food scraps are used annually on the Sovkhoz "Borovlyamy," Minskiy Rayon. Eighteen percent of the feed units consumed at the complex are from this feed. For the year, 9,000 quintals of pork were raised at the farm at a production cost of R108 each.

The manufacturing process for preparing this feed is most highly perfected at the sovkhoz imeni Ul'yanov, Minskiy Rayon. In a well-equipped feed shop with an output of 60 tons per day, a set of equipment has been installed to provide for automated processing of the feed scraps, mixing them with other feeds and delivering them into feed troughs. Two operators with a control panel manage all of this.

However, the possibilities for supplementing feed resources by a more efficient use of scraps are far from exhausted. It has been established by observations that it is possible to collect 150-200 grams of scraps on the average per person per day, or 55-73 kilograms per year in the cities.

The cost accounting type, non-plan feed offices created in each oblast and in the city of Minsk are the primary organisers of food-scrap collection. Their experience is being inadequately generalized. The offices need the assistance of the councils, municipal health divisions, municipal education division, and establishments having departmental residences. Let us take as an example the city of Zhodino. In the regions of the Belorussian Scientific Research Institute of Fur Farming and the Belorussian Scientific Research Institute of Animal Husbandry, the plan for food waste collection is presently being overfulfilled, whereas in the area of the automobile plant a very small amount is collected and only because the plant administration regards this matter with scorn. In the departmental buildings of the automobile plant, trash can areas are yet to be found. The small number of cans put out on the initiative of the office are in a neglected, unsanitary state. The Gorispolkom [Municipal Executive Committee] is not helping to make matters run smoothly. The criticism of SEL'SKAYA GAZETA in the article "Save the Food Scraps," published 19 August 1979, has as yet had no effect. Everything remains as before.

And yet it is possible to organise matters following the example of Molodechno, Borisov, and Bileyka. There, food waste collection is under the permanent control of the gorispolkoms. The municipal housing management, municipal education division and the municipal health division systematically report to them concerning the fulfillment of established quotas for scrap collection in residences, children's and school institutions, hospitals and sanitoriums. As a result, they collect twice as much refuse per resident in Molodechno and Borisov as the average among the other cities in the republic.

Inadequate explanatory work among the people is hindering the matter. The incentive measures for people directly participating in the work are not known to everyone. The farms which use the scraps transfer 15 rubles per ton to the collection offices. A large part of this sum is paid to collectors. A collector who works well (a yard man, a cleaning woman, an elevator operator) receives R67-70 per month in addition to his base pay. The total of such salary is taken into consideration when figuring pensions. If this were known to all of the workers in a communal household, many more scraps would doubtlessly be delivered.

The offices which are engaged in scrap collection are experiencing great difficulties because of the short supply of containers and special transport.

For example, there are not enough trash cans in the Minsk oblast office and not enough special trucks in the Minsk municipal office. The same sovkhoz imeni Ul'yanov is not able to take away the scraps from the Minsk dining halls entirely, just because of the fact that it has only three broken-down trucks ready to be written off.

The short supply of trash cans is explained not only by the untimely and incomplete filling of orders for their manufacture, but by the fact that the offices do not always have means for their purchase and maintenance at their disposal. For example, a Minsk oblast office is now short R20,000 for acquiring inventory. The office could emerge from its financial difficulties if it could sharply increase scrap collection. You get a vicious circle. It is possible to emerge from it if enough food scraps are prepared through the offices not only from the people and from public catering enterprises and commercial organizations, but from enterprises of the meat and dairy industry as well. Such a measure was specified by the special decrees of the elective bodies, but it remains unfulfilled up to now.

The existing order for distribution of food scraps is far from being ideal. Not all of the farms are supplied with modern equipment to process its feed. In a number of locations, the preparation of scraps for feeding is being done primitively.

Increasing the selection and the proper use of food scraps will permit us to replace at least an additional 30-39,000 tons of grain annually on the republic's swine farms. This reserve must be valued.

9194
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LIVESTOCK FEED PROCUREMENT

FOOD SCRAPS COMPARED WITH OTHER FEED ADDITIVES

Minsk SEL'SKOYE KHOZYAYSTVO BELORUSSII in Russian No 2, Feb 80 p 32

[Article by S. E. Margolin, head of the Department of Livestock Raising, Minskaya Oblast Experimental Agricultural Station; Ye. F. Kanashkova, research associate; and F. I. Suboch, head of the Department of the Scientific-Production Association for Production of Potato Products: "Scraps To Work"]

[Text] In livestock raising the shortfall in feed protein at the present time is reaching 20-25 percent. This shows up negatively in the productivity of the animals and it results in high feed costs. Synthetic nitrogen-containing preparations are used on some farms to supplement the ration with protein. However, the protein shortfall may also be supplemented by using many production wastes. For example, 50-60,000 tons of scraps accumulate annually at the republic's enterprises for producing dried potato products. What can be done so that they are not wasted?

We performed an experiment to produce nitrogen-containing additives made from scraps at the Gantsevichskiy Experimental Vegetable Drying Plant. We used a process proposed by the Odessa Technological Institute. What is the essence of it? The potato scraps are loaded into a steam cooker where the starch is broken down into sugars by acid hydrolysis. On termination of the process, urea is added to the hydrolyzate, glycosilurea, which breaks down slowly in the rumen and is better utilized by microorganisms, being formed. There are 0.49 feed units, 275 grams of protein, 16 grams of phosphorus and 1.3 grams of calcium in a kilogram of the obtained product.

We fed the obtained product to young cattle at an experimental base of the experimental agricultural station. One third of the portion of soybean cake and urea which are added to balance the ration of protein were replaced by it. As a result of a three-month test, it was established that the increase in the live weight in the experimental group was 3.6 percent greater than in the group with soybean cakes and 15.6 percent greater in comparison with the group on urea. Feed unit consumption per kilogram of weight gain in this group was 6.4 percent lower than in the group in which the animals were fed on soybean cake and 14.6 percent greater in comparison with the urea group. On the average, the young livestock were fed 930 grams of nitrogen-containing additive produced from potatoes, 719 grams of soybean cake and 91 grams of urea per day, according to the designs of the experiment.

The experimental additive was given to young bulls without an accustomation period. No instances of breakdown in physiological state were noted.

The production cost of one quintal of weight gain in the experimental group was R106.7 as opposed to R108.1 in the group with soybean cake and R121.2 in the group with urea. Thus, production wastes may also be of use if they are sensibly used.

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LIVESTOCK FEED PROCUREMENT

ESTONIAN LIVESTOCKMEN URGED TO CONSIDER GOAT'SRUE

[Editorial Report] Tallinn SOVETSKAYA ESTONIYA in Russian on 12 March 1980 on page 2, turns its attention to the problem of protein in livestock feed and the insufficiency thereof. The author, head of the field work section at the Estonian Scientific Research Institute for Crop Farming and Reclamation, Doctor Kh. Rayg, in a 2600 word article, looks to Caucasian goat'srue (Kozlyatnik vostochnyy [Galega orientalis]) to ameliorate the situation.

"It is generally known that due to the protein deficiency an enormous over-expenditure of feed exists in livestock rations."

Doctor Rayg makes the point that Caucasian goat'srue can do much to make up the deficit without the application of costly nitrogen. The area sown thereto could be expanded to 10,000 hectares in the near future. Everything necessary is already available.

The northern regions of the country are still not well endowed with feed crops. Crops brought in from other areas often do not give seed. This is true, in particular, of such a valuable feed crop as alfalfa. It is precisely because of this lack of seed that in Estonia and other regions of the Non-Chernozem Zone the area sown to alfalfa is expanding very slowly.

Cattle are poorly supplied with green chop in the early spring, there is a lack of protein in the rations which negatively affects livestock productivity. Despite the problems encountered initially after its importation from the south goat'srue is a vitamin rich feed crop with half as much dry protein as clover.

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BRIEFS

STRAW USED FOR CATTLE FEED--In Moscow PRAVDA in Russian on 14 January 1980, page 2, and in Krasnodar SEL'SKIYE ZORI in Russian No 12, December 1979, page 44, two articles urge Krasnodarskiy Kray livestockmen to look to the straw byproducts of rice and cereal crops as a source of cattle feed. A 400-word article by D. Posokhov concentrates its attention on the advantages and modes of preparation of rice straw for feeding to steers. An 800-word article broadens the scope somewhat. The authors T. Dubonosov and I. Lukin make the point that while the problem of mechanization of the grain harvest in the USSR has been solved, the problem of gathering up of straw and chaff remains only half solved. Straw bundles are left as part of the trash in the fields and chaff in many places is scattered to the wind. And yet in nutrient value it is only a little behind hay. The Krasnodarskiy Kray experience is distinguished from the laxity and neglect elsewhere. "In the Kuban' area they have been gathering up all the wheat and oats chaff for several years already, 700,000 to 800,000 tons of additional feed per year. In the winter they enrich it with concentrates and vitamin additives. It serves as a good supplement in increasing cattle productivity. Now they are also gathering barley chaff and making it into granules." [Editorial Report]

SOYBEANS AS FEED--Kiev SIL'S'KI VISTI in Ukrainian on 19 April 1980, page 2, carries an article several thousand words in length with details of the proper technology for raising an abundant soybean crop. The introduction points up the importance of the soybean crop and projects the magnitude of the harvest thereof. "The intensification of animal husbandry is affected by many facters. Chief among them is a sufficiency of feed balanced for protein.... The bean contains 18 to 22 percent oil, 38-45 percent protein, half of which becomes unsubstituted amino acids, rather many vitamins, hydrocarbons and mineral salts. The green mass of soya is also rich in these nutrients. Enterprises which meet these requirements [of the new technology] are gathering 15-20 quintals of soybeans per hectare from bogharic land and 25-30 quintals from irrigated land. In 1980 the soya field in the republic will occupy nearly 100,000 hectares. On 70,000 hectares it will be grown according to the progressive technology which will guarantee the gathering of 20-25 quintals of soybeans per hectare." [Editorial Report]

GOAT'SRUE RECOMMENDED TO LIVESTOCKMEN--In Kiev SIL'S'KI VISTI in Ukrainian on 18 April 1980, page 2, a 300-word article appears lamenting the lack of attention paid by livestockmen to Caucasian Goat'srue (Kozlyatnik Skhidnyy [Galega orientalis]) for livestock feed and proceeds to point up the advantages of cultivating it. It is worth noting that this is not the first time goat'srue has been recommended. In Tallinn SOVETSKAYA ESTONIA in Russian on 12 March 1980, page 2, a longer article went into greater detail on the advantages of cultivating Caucasian Goat'srue and the progress of adapting it for cropping in Estonia. [Editorial Report]

MOLDAVIAN LIVESTOCK CONSUMPTION--[Editorial Report]--In Kishinev SEL'SKOYE KHOZYAYSTVO MOLDAVII in Russian No 3, Mar 80 p 53, an article by N. Koditsa of the Moldavian agricultural journal turns its attention to the abilities of the USSR, the U.S. and Canada to produce grain and other agricultural produce. While the article is quite positive in its treatment of Soviet agricultural development it does make one interesting admission that not everything is quite as it should be. "The country, yes and the republic [Moldavia], has a sufficient quantity of grain at their disposal. However, it is not being used rationally everywhere. In Moldavia up to 50 percent of the grain (by nutritiousness) is expended in rations for large horned cattle. Along with this world practice and the experience of leading farms shows that with rations well balanced in proteins one can get beef with high gustatory qualities without the use of concentrates."

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FATTENING OF BLACK SPOTTED STEERS IN ENCLOSURES, SEMI-ENCLOSED LOTS

Moscow ZHIVOTNOVODSTVO in Russian No 1, Jan 80 pp 34-35

/Article by Corresponding Member of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin I. I. Cherkashchenko and graduate student of the Moscow Agricultural Academy imeni K. A. Timiryazev A. S. Delyan: "The Fattening of Black Spotted Calves in an Enclosure and a Semi-Enclosed Lot"/

/Text/ In the conversion of beef production to an industrial basis along with the construction of capital complexes for the raising and fattening of young cattle in enclosures in recent years the fattening of animals at mechanized lots has become widespread.

Practice shows that in the average daily weight gain and the consumption of fodder the fattening of cattle in standard enclosures is the most effective. However, the construction of such complexes requires major capital investments (the cost per cattle-place is 800-1,400 rubles) and involves great expenditures of time. The technology of fattening cattle at mechanized lots, on the construction of which less capital is spent (the cost per cattle-place does not exceed 250-300 rubles), has an advantage in this respect.

The analysis of the economic activity of feedlots by zones of the country attests to the great economic efficiency (G. V. Yepifanov, 1975; D. L. Levantin, 1977; G. S. Ogryzkin et al., 1977, and others).

At present the fattening of cattle at lots is becoming widespread in the Central Nonchernozem Zone of the RSFSR. Therefore the conducting of experiments for studying the growth, development, fattening and meat qualities of young cattle during raising and fattening at mechanized lots and in standard barnyards is now of great importance.

The study of the questions of raising and fattening young cattle at mechanized feedlots was also a goal of our research. In our research we studied the growth, development, level of meat productivity and quality of the meat of black spotted bull calves. We conducted the experiments at the Kostrovskiy Sovkhov of Istrinskiy Rayon in Moscow Oblast during the period of

1977-1978, it consisted of two periods: a preliminary period (68 days) and an experimental period (357 days).

For the experiment we selected 54 3-month-old bull calves with an average live weight of 98 kg. During the preliminary period the calf was raised according to the technology used at the farm. At the end of this period the calves were evaluated according to the vigor of growth and with allowance made for the type of build were divided into two similar groups of 25 each (Table 1).

Table 1

Average Live Weight and Vigor of Growth of Test Calves During the Experimental Period

Indicator	Control group	Test group
Average live weight of calves (kg):		
when provided for the experiment.	97.3	98.4
at the end of the preliminary period.	159.6	160.2
Average daily weight gain during the 68 days of the preliminary period (g).	916	908
Relative rate of increase (percent).	48.1	47.5

The control group of calves was transferred to a barnyard for the second period of raising, where the animals were kept in pens using the group loose housing method until the end of the experiment. The test group was transferred to a light-duty feedlot, which was constructed according to the plan of the All-Union Scientific Research Institute of Meat and Dairy Cattle Raising (the author of the plan is Yu. I. Belyayevskiy). It has a solid roof and is interconnected with a light enclosure, within which two rows of stalls were installed parallel to each other. The floor in the stalls is made from wood. The separators in the stalls are made from round pipe.

The animals of both groups had free access to fodder. The feeding was in groups, two times in accordance with the standards of the All-Union Scientific Research Institute of Livestock Breeding. The diet of both groups in composition and food value was the same. A concentrate mixture, food and vegetable scraps, hay, straw and grass meal were used as the main fodders in the diet of the animals. During the summer green matter was included in the diet. In spite of the identity of the diets, the consumption rate of fodders by animals of the different groups was different: the calves of the test group consumed more bulky fodders, which were given to both groups freely. As a result the consumption of fodder per calf of this group increased somewhat and for the entire period of the experiment was 3,012 fodder units (the consumption of fodder by the control group of calves was 2,809 fodder units). In food value the concentrated fodders in the diet of the calves of the control group were 53.5 percent, the test group--51.5 percent.

Table 2

Average Live Weight and Average Daily Weight Gain of Calves During the Experimental Period

Age (Months)	Month of year	Number of calves	Dynamics of live weight		Average daily weight gain (g)		
			control group	test group	period (days)	control group	test group
5	June	25	159.6	160.2			
6.5	July	25	199.4	189.5	40	991	736
7.5	August	25	229.4	221.0	31	968	1003
8.5	September	25	259.8	252.7	30	1013	1072
9.5	October	25	288.4	281.1	31	925	915
10.5	November	25	313.0	304.8	30	822	786
11.5	December	25	339.1	323.7	31	841	608
12.5	January	22	367.1	340.5	31	899	553
13.5	February	22	392.2	364.1	28	898	810
14.5	March	22	417.8	394.3	31	825	974
15.5	April	17	444.9	425.3	30	878	1020
16.5	May	17	466.7	457.1	31	705	1024
17	June	17	477.2	469.6	13	802	915

Table 3

Results of Control Slaughters of a Young Test Animal (M ± m)

Indicator	At the age of 14.5 months		At the end of fattening (17 months)	
	control group	test group	control group	test group
Number of animals (head). . . .	5	5	5	5
Average weight (kg):				
culling weight.	414.0±2.44	388.8±3.38	473.6±1.93	466.2±4.62
preslaughter weight	389.6±2.73	365.2±5.11	454.4±2.03	448.0±3.46
fresh carcass	212.2±1.82	200.6±3.77	261.6±2.39	256.7±5.90
internal fat.	11.6±0.81	6.5±0.68	16.2±0.87	15.0±0.90
carcass and fat	223.8±1.56	207.1±3.92	277.8±1.90	271.7±6.14
Yield (percent)				
carcass	54.6±0.45	54.9±0.26	57.6±0.62	57.5±1.13
fat	3.0±0.20	1.8±0.08	3.6±0.19	3.4±0.19
carcass and fat	57.4±0.28	56.7±0.28	61.1±0.49	60.6±0.98
Content in carcass (percent)				
flesh	79.1±0.62	76.8±0.77	81.0±0.40	79.7±0.17
bone.	18.2±0.66	19.3±0.48	16.7±1.11	17.1±0.18
tendons	2.1±0.27	3.6±0.41	1.9±0.08	2.6±0.03

The average live weight and the average daily weight gain during the experimental period per calf are cited in Table 2.

The animals of both groups in the vigor of growth (by months of the experimental period) differ substantially from each other. During the first month at the feedlot the growth rate of the calves in the test group decreased, which is connected with adaptation of the animals to the new conditions of housing. During the entire summer period of 1977 the average daily weight gain of the calves of the control group was 125 g (14.6 percent) greater than that of the test group and was 982 g. The vigor of growth for the animals of both groups during the period of the experiment was the highest in September, and the average daily weight gain per calf of the test group was slightly greater (1,072 g) as compared with the control group (1,013 g).

During the autumn period the vigor of growth of the animals of both groups declined somewhat. During the entire autumn season the average daily weight gain per calf for both groups was practically the same: 929 g for the control group and 917 g for the test group. With the onset of cold weather during the winter period the average daily weight gain in the test group decreased to 640 g, which as compared with the control group is 237 g or 37 percent lower ($P < 0.001$). The retardation in the growth of the calves of the test group during the winter was offset to a considerable extent by faster growth in the spring. At that time the average daily weight gain for them was 997 g, which is 206 g or 20.6 percent ($P < 0.001$) greater than in the control group. During the entire experimental period the average daily weight gain for calves of the control group was 888 g, of the test group--862 g, the difference of 26 g (3.0 percent) is statistically doubtful. The consumption of fodder per kg of weight gain during the same period for calves of the control group was 8.03 fodder units, the test group--8.93 fodder units, and for the entire period of the experiment 7.39 and 8.11 respectively.

The control slaughter of animals at the ages of 14.5 and 17 months was carried out to study the meat productivity (Table 3).

The weight of the carcass is the most important indicator which characterizes the meat productivity of cattle. At 14.5 months for calves of the control group it was 11.6 kg more than for the test calves ($P < 0.05$). When the animals were slaughted at the age of 17 months the difference decreased considerably and was 4.9 kg. No significant difference was observed between the groups in the yield of the carcass. With age this indicator for both groups increased slightly. When slaughted at 14.5 months of age the yield of internal fat for calves of the control group was considerable higher and was 11.6 kg (3.0 percent of the preslaught weight). This, apparently, is explained by the fact that the time preceding the slaughter coincided with the cold season of the year, during which among calves of the test group, which were housed on the feedlot, the consumption of fodder for maintaining life increased, which led to a decrease of the formation of internal fat. With the onset of the warm season of the year the fat formation among them increased sharply, and at the end of the fattening (17 months of age) there were practically no differences between them.

The coefficient of meatiness (the yield of flesh per kg of bone) for both groups was quite high. When slaughtered at 14.5 months the yield of flesh per kg of bone for calves of the control group was 10.0 percent higher as compared with the test group. When slaughtered at the end of the fattening this difference decreased considerably (4.3 percent).

Cold weather had an adverse influence on intermuscular and intramuscular fat formation. The content of fat in the average sample of meat, which was obtained on slaughter at the end of the winter from calves of the test group, was 8.8 percent, the control group--14.7 percent. With the onset of warm weather the intensity of fat formation among the animals housed at the feedlot increased sharply, which led to a decrease of the difference in this indicator between the groups. The fat in the average sample of meat, which was obtained at the end of fattening, in the control group was 17.3 percent, in the test group--15.1 percent. Similar changes were also detected during the analysis of a sample of the longest muscle of the back.

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LIVESTOCK

PROBLEMS IN FOOD WASTE COLLECTION FOR HOG FATTENING

Minsk ZVYAZDA in Belorussian 11 Mar 80 p 2

[Article by I. Turetskiy and I. Yurkevich under rubric "A Shock Front for Livestock Raising!": "Lost Feeds"]

> [Text] Let us begin with a simple truth which is known to one and all--the benefits to be gained from fattening hogs on food wastes. One ton of waste replaces 250 kilograms of grain and can yield up to 50 extra kilograms of meat. Last year, for example, nonplan feed procured in Minsk yielded more than 2,700 extra tons of high-quality pork.
>
> It must be added that reserves of waste in the city are unlimited. They are to be found in literally every home, in schools and preschool establishments, dining rooms and cafeterias, hospitals, enterprises involved in food production, and food stores. All it takes is to properly organize collection and deliver the food wastes promptly where they are needed--the livestock farms.

For the purpose, a special office has been set up in Minsk. We talked to Deputy Director B. V. Shulyakov about how the work is progressing and what problems and difficulties have arisen.

"If we go by average indicators," said Boris Vasil'yevich, "things seem to be pretty good. Overall plans last year were overfulfilled. But not all the units met their tasks. The Kommunarka, Minskpivprom, Minskkhlebprom, and other associations do not yet fully appreciate the importance of this matter."

Then we visited the dining facilities trust in Leninskiy Rayon, which was 86 tons short in food waste deliveries last year. And they are lagging considerably behind this year. According to Planning Division Chief S. U. Daneyka, a number of public food service outlets will continue to fall behind the plan: Our workload is too big, they complain. But is it?

Among the biggest laggards in the trust is the dining facility of the Machine-Tool Plant imeni Oktyabr'skaya Revolyutsii (which incidentally also has two other cafeterias). Last year they were 17 tons short in waste deliveries.

Administrator Zh. Gatovskaya revealed the reason for this big lag. It turns out that every day at least 110 kilograms are sent to the neighboring Kryshtal' Alcohol and Vodka Association to feed their watchdogs!

A. Safronov, head of the vodka plant's security, confirmed that for every 3.5 tons of food wastes they pay the dining facility nine rubles per month!

Well, that's pretty profitable for the neighbors, but rather disadvantageous for the trust, which has no way to make up for the lag.

We have cited just one example of extraordinary apathy toward a vital feed source. Many similar instances were found in the dining facilities of Zavodskiy, Sovetskiy, and Oktyabr'skiy rayons, where food waste collections are badly organized. Huge quantities are discarded and hauled to the dump.

It is necessary to dwell in more detail on the collection of food wastes in housing complexes. Both last year and this, undercollection in the city added up to many hundreds of tons. The reason is simple: Some people just don't like to "get their hands dirty."

Consider the following example. All winter, loaded cans of food waste stood in the courtyard of high-rise Building No 21 on Surganov Street, and no one bothered to haul them away. Chief Viktor Ivanovich Yemel'yanov of Housing Administration Office No 25 said in response to criticism, "We'll look into it!" So what do we find? There are no food waste cans in the stairwells of any of the five floors, so the residents have to throw it into garbage cans.

The same puzzling fact is discovered in Zavodskiy Rayon's Housing Administration Office No 56. Residents of nine-story Building No 41 on Gerasimenko Street complain that from December of last year to this day they have had to discard their food wastes in garbage cans. No package containers are placed on this building's floors.

And consider the situation of four boarding houses of the worsted wool combine, housing more than 2,000 persons.

Boarding House No 2 Chief M. Kunitskaya has this to say: "The cleaning women are taking all the food wastes home with them."

It is estimated that more than seven tons monthly are taken from two boarding houses on Solnechnaya Street alone, carried away in buckets and cans to feed privately-owned hogs. In the boarding house of the Textile School on Borodinskaya Street the wastes are thrown away in the garbage cans. And none of the school's administrators are concerned by the fact that 12 tons of wastes are hauled to the dump every year.

We have been discussing here the unsatisfactory state of affairs in the collection of nonplan feeds. The situation is even worse with respect to transporting the wastes to the stock farms. The main "clients" are the suburban sovkhozes Baravlyany and imeni Ul'yanov, which accommodate 26,000 hogs for fattening.

At present, all food wastes are hauled in these sovkhozes' vehicles. By the present schedule, the trucks drop by the food service establishments only two or three times a week, and not very regularly at that. The cafes, restaurants, and cafeterias keep sending complaint signals: 500 to 1,000 kilograms of collected wastes just sit there for days on end, spoiling and losing their nutritive value.

Similar facts are reported by Sovetskiy Rayon's Dining Facilities Trust Deputy Director M. Karagina, Frunzenskiy Trust's Trade Division Chief M. Mardvinenko, Main Cafeteria Administrator F. Klavsuts of Plant imeni Lenin, and many others. Cafeteria No 70 of the Refrigerator Plant hasn't seen a truck from Sovkhoz imeni Ul'yanov for two weeks.

Baravlyany Sovkhoz Dispatcher L. Karostsik states that she is constantly getting calls from the city asking them to pick up the food wastes more promptly, but there aren't enough trucks. There are six GAZ-51 trucks in service, but they keep breaking down.

What is the remedy for this situation? How to solve the acute transport problem?

Deputy Director A. Zhuravlev of Belzhivprom Trust, which has jurisdiction over both sovkhozes, has a reasonable idea. He thinks that city food waste collections should be concentrated under a single authority. This matter, adds Anatoliy Georgiyevich, has been raised repeatedly by the trusts and sovkhozes and various councils. Many letters have been written to the Minsk Gorispolkom. Yet the problem has yet to be resolved. It will have to be resolved immediately.

A. Zhuravlev's reasonable proposal is supported by Comrade Shulyakov, deputy director of the city's Office for the Collection of Nonplan Feed Wastes. He is in favor of organizing a truck column for this purpose within the specialized city sanitation motor pool, allocating for it an additional six to eight vehicles. For relatively little cost it would be possible to arrange for continous hauling of the many hundreds of tons of food wastes that accumulate daily in Minsk.

But until this is done, possibly in other variants, it is essential to beef up the truck transport capacity of both sovkhozes. It is wrong to place in jeopardy the efforts of thousands of people in different organizations and departments of the city involved with supplying the livestock farms with additional nonplan feed resources.

Now it's up to the Minsk Gorispolkom.

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LIVESTOCK

PROBLEMS, OPPORTUNITIES IN USE OF FOOD WASTES FOR FEED

Minsk ZVYAZDA in Belorussian 23 Mar 80 p 1

[Article by V. Tarasevich under rubric "Livestock Wintering": "Wastes Into Profits"]

[Text] Our republic's food and meat-dairy industry has substantial reserves for adding to the feed balance of social livestock farming. Recent years have seen a big increase in the production of equipment for making combination feeds, including new kinds of raw materials. For example, who would have guessed that worthless poultry feathers could be used to make an excellent feed meal? Such a technology has been put into use in the Minsk Meat Combine. The efforts have paid off in full. The combination feeds industry is now getting a valuable and nutritious feed additive. It is worth while to pay serious attention to wastes and production by-products. Difficulties in providing livestock with feed, due to unfavorable weather conditions, are being reported in many rayons. In places where things have been taken effectively in hand, getting the maximum yield from each feed unit and making creative use of reserves, such complaints are fewer. Food industry wastes in Borisovskiy Rayon are being utilized much more efficiently now than before. The farms are enthusiastically making use of potato pulp, beer mash, and pasta and bakery plant wastes to fatten hogs.

A dairy plant and a meat combine there are located near each other. The farms which sell milk make regular use of skim milk and whey in accordance with set norms. The Borisov Dairy Plant has enough tanks to store the whey, but it is put immediately to work, sent to the hog farms on suburban kolkhozes and sovkhozes.

How about the situation in the meat combine? Several tons of waste are accumulated there every day, chiefly the contents of the rumens of cattle. In Borisovskiy and many other rayons such wastes are used chiefly for fertilizing.

Couldn't a more rational use be found?

To this question, specialists of the Administration of Agriculture of the Minskaya Oblispolkom and the Belorussian Ministry of Agriculture did not have a clear answer. Officials of the enterprises and the republic's Ministry of Meat and Dairy industry have also taken a passive position.

Meanwhile, some of the rayons have gained some interesting experience which should have been investigated and utilized long ago. For almost five years now Kolkhoz imeni Sil'nitskiy in Politskiy Rayon has been processing meat combine wastes to make livestock feed.

"The technology is very simple," says Kolkhoz chairman Ya. I. Kimstach. "About the same as in making grass meal. In a year's time we get about 400 tons of dry matter, each kilogram of which contains 0.4 to 0.5 feed units. It's easy to see the advantages of processing wastes, how much clover is saved."

There is another reserve for social hog raising in the republic's meat combines--broth from the cooking of by-products, ham, and sausages. These, again, are not being fully utilized. The main reason is lack of interest and apathy on the part of enterprise officials, also the lack of special containers. Again, consider the example of Politskiy Rayon. Every day the Turavlyanskiy Sovkhoz hauls 700 to 800 kilograms of broth away from the combine and uses it on the hog farms. How has this rayon managed to coordinate things so well between agriculture and industry, while other rayons lack this kind of contact? This is the question that should be put to officials of the republic's Agriculture and Meat and Dairy ministries.

It should be mentioned here that this year it has been decided to arrange for the production of feed additives and dry vegetable livestock feed in the republic's meat combines. Plans call for preparing reliable quantities of such feeds and making them available to the farms. But things are going to slowly. There are complaints of technology shortcomings and the lack of equipment.

The proper use of wastes requires the interaction of sectors of industry and agriculture. Only in this way can we achieve the desired effect. Unfortunately, even the suburban farms near Minsk are not making full use of available reserves. In January, Sovkhoz imeni Ul'yanov collected only 228.4 tons of whey from the city's dairy plant, versus a scheduled 620 tons; Baravlyany Sovkhoz also collected less than half the amount scheduled. Especially difficult conditions develop on weekends: containers become overloaded because of the lack of transport. Approximately the same thing is seen in the Minsk Dairy Combine. The lack of an organized schedule of waste haulage impairs rational use of them.

The republic's oblasts and the city of Minsk have set up operative offices for the procurement of nonplan feeds and food wastes. These autonomously-financed organizations are doing valuable and useful work. But for some reason, the Minskaya Oblispolkom has restricted the work of the office just to housing-communal operations and the public feed service system. Only small amounts of waste are coming in from the cafeterias and snack bars of schools and hospitals. Obviously, more contracts should be drawn up with food service enterprises and meat and dairy industry outfits for waste procurement. This would make it possible to exercise stricter control over the use of reserves to extend the food balance in social livestock farming. Another crucial problem is that of the equipment available to these offices. Because of the poor condition of automotive transport facilities in Minskaya Oblast, about 100 tons of waste are lost every year. The procurement workers are obliged to appeal to various organizations and facilities for truck repairs and to have truckbeds patched. It is puzzling why the Oblast Production Administration for Material-Technical Supply of Agriculture is standing aloof.

During the massive feed procurement season in the republic, effective and bold measures were found and taken to boost feed supplies. Now, when the wintering season is coming to its closing and most crucial period, we need energetic and purposeful efforts to make the fullest possible use of available reserves.

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LIVESTOCK FEED, PRODUCTIVITY PROBLEMS, PROSPECTS

Minsk ZVYAZDA in Belorussian 27 Mar 80 p 2

[Article by V. Shchurok, division chief, Main Administration of Livestock Raising, Belorussian Ministry of Agriculture, under rubric "ZVYAZDA's Commentary": "Livestock Farmers Put to the Test"]

[Text] There is no more important task for livestock farmers today than to complete the wintering season successfully, to carry out the missions of the final year of the five-year plan. The accomplishment of these tasks is considerably complicated by the fact that the farms are not supplied with enough feeds. This situation requires of each official, specialist, and farmer a high level of organization and labor discipline. It must be kept in mind that livestock productivity depends on more than a proper diet alone. Of no less importance is the maintainance of an optimal microclimate in the animals' quarters, a reliable water supply, removal of manure, and enrichment of diets with vitamins and minerals. As is well known, when animals' quarters are cold and damp it takes 20 to 25 percent more feed per unit of output than under the right conditions.

The main concern now is to make rational use of feeds, to dispense them thriftily. Feed should be given to the animals only in prepared form. Each kilogram of feed must be made to yield the maximum gain.

The course of stall maintainance in the republic in the first two months of this year attests to the fact that despite very difficult wintering conditions the kolkhoz and sovkhoz farm workers used all their efforts and skills to prevent livestock losses and obtain the maximum possible output. On many of the farms, the workers' intensive efforts paid off in good results. As of 1 March, for example, cattle losses on the republic's farms had been reduced by 1,500, hog losses by 21,400, and sheep losses by 1,200 compared with the same period last year.

Livestock plague declined in all oblasts. At the same time, during the same period calf production rose by three percent and lamb production stood at last year's levels. Milk herds increase by 29,000 head, or two percent.

But the low level of livestock feed provision had an adverse effect on productivity. Average milk yields per cow in the first two months stood at 267 kilograms, or 11 kilograms less than last year.

The decline in cow productivity has reduced gross milk output throughout the republic. A deficit has developed in all oblasts except Minskaya. The greatest deficits occurred in Vitebskaya and Mogilevskaya oblasts: milk output there was only 92 and 93 percent, respectively, of last year's.

In February alone, 83 rayons had reduced milk yields per cow. All rayons in Vitebskaya Oblast experienced declines, 16 rayons in Mogilevskaya, 14 in Gomelskaya, 13 in Brestskaya, and 12 in Grodnenskaya. The biggest deficits occurred in Uzdenskiy and Cherikovskiy rayons, where yields declined by 25 kilograms, and in Rogachevskiy, Dubrovenskiy, Lioznenskiy, Tolochinskiy, Berezovskiy, and Kobrinskiy rayons--20 kilograms.

How about milk procurement? In the first two months the state purchased 5,100 tons more than in the same period last year. Vitebskaya and Mogilevskaya oblasts, however, sent 3,600 and 600 tons less, respectively, to the reception points. Milk procurement is poorly organized in Dubrovenskiy, Lioznenskiy, Beshenkovichskiy, Krichevskiy, Ushachskiy, and Cherikovskiy rayons. They sold the state less than 90 percent of last year's amounts.

The agricultural administrations of these and other rayons which have allowed milk procurement to decline will have to take all the necessary steps to boost the productivity of the milk herds. Every effort must be made so that each farm meets targets of milk sales to the state in the first quarter.

More work must be done with respect to purchasing surplus milk from the population. This will make it possible to speed up the fulfillment of procurement plans. In the republic as a whole in the first two months, 11,400 tons more milk were purchased from the population than last year, but in Mogilevskaya, Vitebskaya, and Minskaya oblasts purchases were substantially lower than the average republic indicators. It is essential to immediately step up organizational and instructional work among rural inhabitants, and farm officials will have to help these efforts in every way. It is the duty of every farm worker to exert every effort to complete livestock output and procurement plans.

6854
CSO: 1824

REVIEW OF NEW GRAIN ELEVATOR CONSTRUCTION

Moscow EKONOMICHESKAYA GAZETA in Russian No 13, Mar 80 p 2

[Article: "How New Elevators are Built"]

[Text] With the current scale of grain production and procurement the fight against grain losses and its dependable preservation at all stages from the field to the consumer is one of the great resources for increasing the foodstuff reserves in the country and is one of the most important factors in the steadfast growth of the well-being of the Soviet people. The successful solution to this multi-plane goal is integrally related to the intensive development and overall strengthening of the technical base of procurement, to the building of modern grain-reception enterprises equipped with the most modern highly productive equipment, of large-capacity plants and shops to process grain.

The state annually allocates significant monetary and material resources, which grow from five-year plan to five-year plan for the development of the technical base for storing and processing grain. Suffice it to say that in 4 years of the current five-year plan about 3.5 billion rubles have been allocated for the building of elevators, mills, mixed-fodder plants and other structures.

The Pace has Grown, But...

Large building subdivisions of union ministries--Minsel'stroy [Ministry of rural construction], Minpromstroy [Ministry of industrial construction], Minstroy [Ministry of construction], Minenergo [Ministry of energy], Mintyazhstroy [Ministry of heavy industry construction] and some others--and many enterprises of the machine-building industry participate in the building of grain-reception enterprises. The Central Committee of the Komsomol has given great administrative aid to the building of grain-storage facilities by declaring many structures of the USSR Minzag [Ministry of Procurement] shock Komsomol structures.

As we see from the diagram being published, the pace of elevator construction was higher than during the Ninth Five-Year Plan. In the past 4 years of the

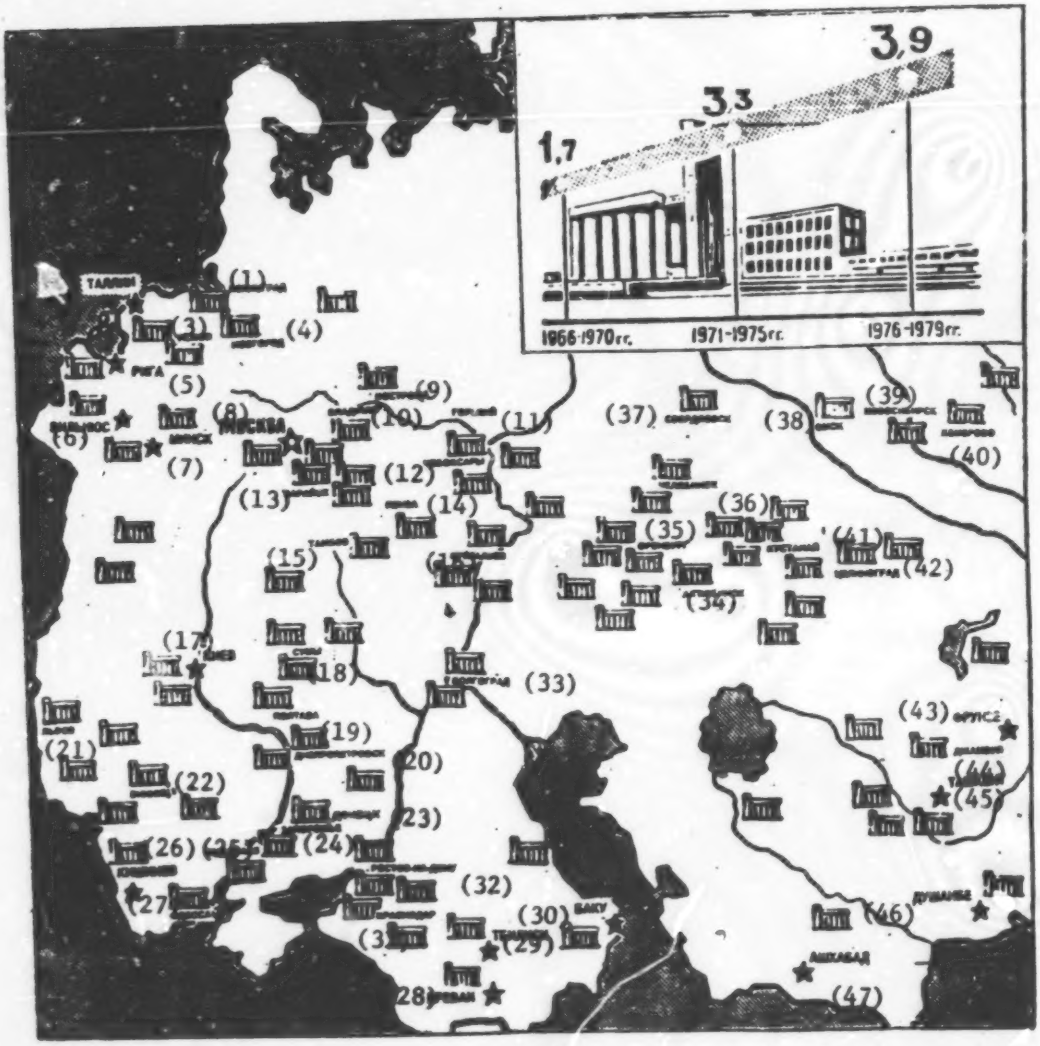
10th Five-Year Plan alone grain storage facilities with a capacity of about 18 million tons were put into operation, including over 15.6 million tons of capacity in elevators. This is almost equal to the total that was put into operation during the Ninth Five-Year Plan. The average annual introduction of elevator capacities has increased by over 600,000 tons. Sixty-four mixed-fodder plants with a capacity of over 27,000 tons per day and 16 large milling enterprises were built and put into operation.

Last year state grain capacities were supplemented by new powerful elevators built at the stations of Davydovka in Voronezhskaya Oblast, Sakmarskaya in Orenburgskaya, Petukhovo in Kurganskaya Oblast, Ol'ginskaya and Beloglinskaya in Krasnodarskiy Kray, in the cities of Zaraysk in Moscow Oblast, Tselina in Rostovskaya Oblast, Naberezhnyye Chelny in Tatarskaya ASSR, at the stations of Mayna in Ul'yanovskaya Oblast, Novoaydar in Voroshilovgradskaya Oblast, Predgornaya in Vostochno-Kazakhstanskaya Oblast and in many other rayons producing commodity grain.

The collective of builders of the Yuzhelevatorstroy [Southern elevator construction trust, [illegible] D. Rozin) of Minsel'stroy of the Ukrainian SSR worked in an organized manner. It built and submitted the elevators at the stations Varvarovka in Nikolayevskaya and Oktyabr'skaya in Krymskaya oblasts ahead of schedule. The elevator at the station Malauz of Bashkirskaya ASSR was put into operation earlier than expected by the trust Uralelevatorstory [Ural elevator construction trust] of the RSFSR Minsel'stroy. The elevators at the stations Prosyanaya of Dnepropetrovskaya Oblast (association Dneprosel'stroy [Dnepr agricultural construction association], director V. Velichko) and Guty in Khar'khovskaya Oblast (trust Ukrelevatormel'stroy [Ukrainian elevator and mill construction trust], director V. Sobolev) were put into operation on schedule. The storage facilities of mechanized grain storehouses have increased noticeably.

At a number of building sites a stable businesslike cooperation has developed between the collectives of builders and installation workers, who deal well with the established tasks and eliminate shortcomings directly on location while remaining in close contact with the directors of grain-reception and grain-processing enterprises and with workers of planning institutes. Here as a rule there are staffs available for making operational decisions about problems, socialist competition has begun among collectives and constant controls have been established over the fulfillment of each stage in the work schedule. Local party and soviet organs are attentively watching to make sure that building sites are supplied with technological equipment on schedule and they are giving practical help in mobilizing material and personnel resources.

This kind of experience of skilful management and building organization of elevators, flour-milling and mixed-fodder plants has been amassed in the Ukraine, in Moldavia and in some oblasts of the RSFSR, Belorussia, Kazakhstan and Uzbekistan.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A map of elevators under construction that should be put into operation during 1980. The diagram shows the introduction into operation of elevator capacities according to five-year plans (on the average per year, millions of tons).

Key on following page.

Key to map on preceding page:
1. Leningrad
2. Tallin
3. Pskov
4. Novgorod
5. Riga
6. Vil'nyus
7. Minsk
8. Moscow
9. Kostroma
10. Vladimir
11. Gor'kiy
12. Cheboksary
13. Zaraysk
14. Penza
15. Tambov
16. Kuybyshev
17. Kiev
18. Sumy
19. Poltava
20. Dnepropetrovsk
21. L'vov
22. Vinnitsa
23. Donetsk
24. Zaporozh'ye
25. Nikolayev
26. Kishinev
27. Odessa
28. Yerevan
29. Tbilisi
30. Baku
31. Krasnodar
32. Rostov-na-Donu
33. Volgograd
34. Aktyubinsk
35. Orenburg
36. Chelyabinsk
37. Sverdlovsk
38. Omsk
39. Novosibirsk
40. Kemerovo
41. Kustanay
42. Tselinograd
43. Frunze
44. Dzhambul
45. Tashkent
46. Dushanbe
47. Ashkhabad

Unfortunately, this experience still has not been widely applied. From this comes the annual underfulfillment of plans for putting procurement structures into operation, their low building readiness, and the constant violations of normative schedules for putting enterprises into operation.

During the years of the 10th Five-Year Plan about 1 million tons of elevator capacities, milling capacities for processing 4,000 tons of grain per day and mixed-fodder plants with a daily capacity of over 10,000 tons were not put into operation on schedule. The milling combine in the city of Nakhichevani has been in the process of being built for over 13 years by Trust Number 5 of Minpromstroy of the Azerbaydzhan SSR. Builders of the Sevanstroy Trust of the Minpromstroy of the Armenian SSR have been building the milling combine in the city of Sevan since 1969. The elevators at the stations of Novosergiyevskaya in Orenburgskaya, of Bashmakovo in Penzenskaya and of Dzhalagash in Kzyl-Ordinskaya oblasts should have been put into operation in 1978. However, the building of these facilities by the building subdivisions of the USSR Minsel'stroy has still not been completed today.

Minsel'stroy organizations, which do over half of the total volume of work to build enterprises for USSR Minzag, were able to fulfill last year's plan in only 34 of the planned 128 facilities. The builders of USSR Minstroy fulfilled plans for only five of 22 planned facilities. Minpromstroy fulfilled plans on six structures out of 15.

The Price of Imperfection

During the years of the current five-year plan it has been possible to achieve somewhat of an improvement in the quality of building as a result of the mutual efforts of builders and clients and of the increased mutual demandingness on some structures. However, a radical improvement in this matter has not yet been reached. Violations of building norms and regulations and divergences from plans are still tolerated on the construction sites of elevators, mills and mixed-fodder plants.

Thus, the organizations of Glavelevatorspetsstroy [Main administration of elevator and special construction] of RSFSR Minsel'stroy have been producing elevators with great imperfections at the stations of Yekaterinovka, Bobrovka and Balashov of Saratovskaya Oblast. Defects were tolerated by the workers of the trust Ukrelevatormel'stroy [Ukrainian elevator and mill construction trust] of Minsel'stroy of the Ukrainian SSR while laying the foundation for the silage building of the elevator in Ivano-Frankovsk. A great deal of time and many resources have been spent to eliminate these defects. The building organizations of USSR Minstroy tolerated defects while laying foundation slabs for the building of a ferroconcrete storehouse for raw materials of a mixed-fodder plant in the city of Daugavpils of the Latvian SSR and for the building of an elevator in the city of Dzhuma in the Uzbek SSR.

However, it would be unjustified to blame only the subsidiary building organizations for this. To a certain degree the client service and the subdivisions of USSR Minzag are to blame for the non-fulfillment of plans and for the low quality of facilities for procurement enterprises because in some places they have exercised poor controls over the building of structures. Individual workers of the administration of grain products have demonstrated mismanagement in accepting structures for operation while they are grossly incomplete. This results in lags in the assimilation of new enterprises. This is the situation at the mill in the city of Kokande which was put into operation in September of 1971. For 5 years it has not been possible to assimilate the mill capacities in Dzhambay and Spitak.

Violations and errors in the planning of capital investments, in the designing of structures, in supplying structures with technological equipment and in assimilating new capacities have had a negative effect on the course and building schedule of structures. As a result there is a growth in the number of incomplete structures.

The institutes of Glavpromzernoproyekt [Main administration of planning for the grain industry] are still poor in their supervision of the quality of building and other work included in design documentation. There are still cases of the practice of introducing changes and corrections into designs. This results in added expenses for building and in a non-adherance to the schedule for the operational start of the structure. The construction of mills is behind schedule in Novokuznetsk of Kemerovskaya Oblast, in Bratsk of Irkutskaya Oblast and in Shamkhale of Dagestanskaya ASSR because of the untimely issuance of corrected documentation.

The Goals of 1980

For several years now there has been a serious problem with the delivery of equipment and cables for operational structures. These frequently arrive at the wrong time and in incomplete sets. The unloading of many types of equipment necessary for an operational start of the structure during the first 6 months of the year has been planned for the third and fourth quarters. In 1979 the delivery of 1,200 equipment items and over 60 kilometers of cables was very late and this held back building-installation work on large operational structures, resulting in a violation of the schedule for their operational start. The plants of Minlegpishchemash [Ministry of Machine Building for Light and Food Industry and Household Appliances]--the main supplier of equipment for Minzag structures--alone last year did not deliver nine sets of grain-drying units, 105 conveyors, 537 norias, 252 separators, 129 grain-cleaning machines and some other equipment. Sometimes this occurs because of the untimely issuance of order specifications and because of frequent corrections of technical documentation and replacement of equipment planned by the design. For these reasons last year 16 operational structures did not receive equipment on schedule.

For this reason all organizations that are directly or indirectly involved in the building of procurement enterprises have the task of precisely fulfilling their contractual agreements and of improving the quality of work performed. This task is especially urgent this year. This is not only the final year of the 10th Five-Year Plan but also a responsible period in preparing for work during the 11th Five-Year Plan. This year contractual building organizations and workers of procurement organs must complete a very intensive program. Considering the structures that were not put into operation last year it will be necessary to build and put into operation elevators with a total capacity of almost 4 million tons, 16 mills and over 20 mixed-fodder plants.

The map indicates the larger elevators that must be put into operation in 1980. The number of new structures is being curtailed with the aim of focusing attention on operational structures. Fixed resources and material resources are being concentrated on operational and large, leading structures.

During the current five-year plan the experiment of storing grain resources in metal silos, which was conducted in various climactic zones of the country, came to an end. Observations demonstrated their high degree of dependability. The building of such storehouses is less expensive. Less time and manpower is required for building them. The necessary production base is now being developed for the building of metal capacities. In Minsk a plant for rolled designs and structural members for metal silos has been built and is already in production. The all-union association Elevatorstroy [Elevator construction association] is forming special building-installation organizations which will construct new elevator capacities for existing grain-reception and grain-processing enterprises. In addition to this there has been a study of the experience of building elevator capacities using the method of uninterrupted winding of sheet metal into cylinders of various diameters.

At the present time there is one goal for all procurement organizations--to successfully prepare for grain harvesting during the final year of the 10th Five-Year Plan. In order to meet this goal it is essential to ready the material-technical base of existing granaries and to secure the quality fulfillmnnt of plans on the building of new enterprises. To build quickly, economically, using a modern foundation--these are today's requirements which must become the irrevocable precepts of all organizations which are responsible for constructing grain storehouses.

8228
CSO: 1824

GRAIN ELEVATOR CONSTRUCTION IN RSFSR

Moscow SEL'SKAYA ZHIZN' in Russian 19 Mar 80 p 2

[Article by A. Kosyakov, senior engineer of the Sevkavelevatorstroy [Northern Caucasus Elevator Construction Association]; P. Malevanov, director of the trust Uralelevatorstroy [Ural Elevator Construction Trust]; and A. Gorbunov, director of the trust Sevzapelevatorstroy [Northwestern Elevator Construction Trust]: "Modern Storage Facilities for Grain"]

[Text] The collectives of organizations and enterprises of the RSFSR Ministry of Rural Building and of the RSFSR Ministry of Procurement have taken on great responsibilities for this year regarding the accelerated development of capacities for storing and processing grain. In particular, it has been decided to put into operation elevators with a total capacity of 1,720,000 tons, or 118,000 tons more than indicated in the plan and mixed-fodder plants producing 3,230 tons of products per day as compared with the planned 2,230 tons. SEL'SKAYA ZHIZN' correspondents asked the directors of some elevator-construction organizations to tell us how work is proceeding to fulfill these obligations, and what is being done to introduce the largest number of new capacities in time for this year's harvest.

At an Operational-Start Pace

[A. Kosyakov] The collective of our trust, Sevkavelevatorstroy, knows well its responsibility in developing the base for the reception, storage and processing of seed in the rayons of the Northern Caucasus. This year we must build elevators with a capacity of 262,800 tons. These new facilities are located in the elevators of Tarasovskiy, Belaya Kalitva, Don-25 Poultry Complex in Rostovskaya Oblast and in the stannitsas of Ol'ginskaya and Slavyansk-na-Kubane in Dagestanskaya ASSR.

Here special attention is focused on improving the organization of labor, on raising its productivity and on strengthening labor discipline. All work is done in two shifts. For installation work there is a three-shift schedule.

Each operational structure has a complex engineering plan that enables workers to achieve a uniform pace in building. In order to deal with the intensive program at the operational structure workers have been recruited from the Armavirskiy and Stavropol'skiy construction convoy, from the Sal'skaya and Tikhoretskaya mobile columns and from other subdivisions.

Effective measures have been taken to ensure that the Nal'chinskiy and Tikhoretskiy plans of ferroconcrete articles, which are our subsidiaries, as well as the Bataykiy Repair-Mechanical Plant fulfills all orders for the operational structures on a priority basis.

At the Don-25 Poultry Complex the elevator facilities are being constructed by the meritorious builder of the RSFSR V. Marchenko from the Bataykiy SP-42. This collective has already completed work valued at hundreds of thousands of rubles above the plan. The brigade of G. Mitlinov of the Millerovskiy PMK-600 is building the elevator in the settlement of Tarasovskiy precisely on schedule.

The trust recruits subcontracting organizations in order to fulfill the work. Unfortunately, not all subcontractors understand their duty correctly. Thus, the organizations of the USSR Ministry of Transportation Construction annually accept work for no more than 100,000 rubles of the total 400,000-900,000 rubles' worth offered by the trust and this of course slows work down. The client also should take a more interested position by concerning himself with the scheduled delivery of equipment to operational structures in good time and by raising the quality of technical documentation.

To Keep Our Word

[P. Malevanov] Our trust's collective last year submitted 10 structures for the storage and processing of grain with a total capacity of 295,800 tons for operational starts. In particular, the construction of large elevators in the city of Tobol'sk of Tyumenskaya Oblast and Petukhov of Kurganskaya Oblast was completed.

This year we must put new capacities into operation for grain storage at the stations of Yemanzhelinskaya of Chelyabinskaya Oblast, of Golyshmanovo of Tyumenskaya Oblast and of Makushino of Kurganskaya Oblast, as well as in Nizhniy Tagil, Shadrinsk and Kurgan. In addition, we must put a large mixed-fodder plant in Troitsk, Chelyabinskaya Oblast, into operation.

In the recently-published obligations it was planned that equipment for operational structures of this year would be delivered no later than 3 months prior to their operational starts. At the present time the situation is still an alarming one. According to the data we have, a significant amount of equipment has been earmarked for the fourth quarter. Here timely interferance is required.

Planning questions have not been given a final solution in the building of a mixed-fodder plant. The institute Sredazpromzernoproyekt [Central Asian Industrial Grain Planning Institute] did not issue composite estimates and as a result builders in some places have been forced to work "blindly."

The collective is also concerned about the creation of necessary surplus for subsequent years. In connection with this the unsatisfactory planning of elevator building in the Urals and in the Transurals is very alarming. We feel it is unjustified that the volume of such work in our zone has dropped from 17.5 million rubles in 1976 to 10.5 million rubles in 1980. Having completed the building of elevators in Petukhov, Irbit, Magnitogorsk, Miass and Lebyazh'yem, the trust last year alone lost about 400 highly trained workers-elevator builders who turned out to-be-out of the running. Our clients do not have the planning-budget documentation for building in subsequent years. We feel that the RSFSR Ministry of Procurement should especially examine this question and take immediate measures to provide the elevator builders of the Urals with a stable work front.

Demand and Responsibility

[G. Gorbunov] The collectives of our trust have taken on great obligations this year. The trust administers work in nine oblasts of the RSFSR's Northwest. In each of these oblasts elevator builders have pledged to significantly overfulfill their tasks. Suffice it to say that it has been decided to complete one of the largest structures--a mixed fodder plant in the settlement of Volosov of Leningrad Oblast--14 months earlier than usual.

The calculations of the builders are being supported by their deeds. It is true that things are still moving behind schedule on structures in Kalininskaya, Kostromskaya and Smolenskaya oblasts. We are taking measures to correct the situation here. We are trying not to disperse the work force and technology and to concentrate them at the most important sites. We are striving to more actively introduce progressive forms of work organization.

Special attention must be given to strengthening brigade cost accounting. Of the 27 brigades in the various production subdivisions of the trust over half work by contract. They have taken on the obligation of equipping each structure assigned to them on the building site from the zero cycle to the operational cycle. Consequently, the effectiveness of the work of each brigade will be determined by the final results. We have enlarged complex brigades which manage the building of 2-3 structures at once. This enables them to maneuver the work force and technology better.

A no less important role in the fight to fulfill obligations is played by the ties with plants and suppliers of materials and equipment. We are seeking direct contacts with everyone. The trust dispatcher secures the well-defined delivery of building materials, skipping intermediate bases and crossing points.

Undoubtedly, the work that is before us is intensive. It requires a feeling of responsibility from and an exactingness toward every builder. Only in this way will it be possible to successfully achieve our goals.

8228
CSO: 1824

TILLING AND CROPPING TECHNOLOGY

SPRING CROP CARE ADVICE

Kiev SIL'S'KI VISTI in Ukrainian 2 Apr 80 p 1

/Article by V. Remeslo, director, Myronivs'kyy Scientific Research Institute of Selection and Wheat Seed Growing, hero of Socialist Labor, academician; V. Sayko, deputy director for scientific work, candidate of agricultural sciences on: "Spring Care for Winter Crops"/

/Text/ This article will discuss certain features of spring winter crop care with special consideration of the state of crops this spring.

An analysis of meteorological data shows that winter wheat plant growth and development begins during late spring vegetation renewal. Because individual areas were not adequately provided with moisture last fall this crop entered winter insufficiently developed and also because an ice crust covered part of the sown area for a long time this winter, each field must first of all be thoroughly inspected. This is needed to determine accurately the extent or type of damage or winter crop loss at the time of spring vegetation renewal, and to decide on correct measures which would provide for the planned gross grain harvest.

Winter crop care must be based on the specific crop state and on the agro-ecological conditions of its development. The concern here is for its topdressing.

Normally developed crops, especially on areas which were insufficiently fertilized in the fall, should be top dressed during the vegetation renewal period early in the spring with nitrogen fertilizers, 30 kg activated substance per hectare. It is desirable to apply them again with disk seed drills or by the root method using the same amount of fertilizer.

Methods of application

Myronivs'kyy Scientific Research Institute of Selection and Wheat Seed Growing has determined that on the average during the last three years the harvest increase of "Illichivka" after peas for seed without basic fertilizing amounted to 6.4 quintals following the application of 30 kg activated nitrogen per hectare early in the spring by the surface method. After application of the same nitrogen dose with disk seed drills or by the root method the yield was 9.4 quintals. When these nitrogen doses were applied early in the spring by the surface method, and the second time plants were fertilized by the root method, grain harvest increase reached 13 quintals per hectare.

Well-developed crops should be top dressed only by the root method, with a fertilizer dose of 30 kg of nitrogen per hectare. When seed drills cannot be used to apply them, aircraft use is more effective over these crops, but only after the completion of spring tillering, at the beginning of plant stem elongation (when the first stem node may be felt).

Thinned and insufficiently developed crops which must be improved need not be top dressed early in the spring. These crops should be sown or resown with barley at a suitable time with simultaneous row full mineral fertilizer application. Research conducted at our institute showed that thinned winter wheat "Illichivka" sown over with barley "El'hina" variety (sowing norm - 3.5 million sprouting seeds per hectare) provides for a harvest increase of 10.5 quintals per hectare. Because bald patches will appear over some areas (resulting from a prolonged ice crust) more seed drills should be reconstructed as was done by the Cherkasskaya and Kievskaya Oblast farm workers. With the help of this equipment crops can be top dressed with fertilizers, turning on grain sowing mechanisms over damaged areas.

Very thinned, insufficiently developed crops should be resown with spring crops at appropriate times with adherence to agro-technological rules.

Next, use of phosphorus potash fertilizers and their methods of application will be discussed. Research at our institute has shown that their effectiveness in spring use is considerably lower than in the fall, prior to sowing. In fact, on areas after peas sown for seed, surface application of 30 kg activated phosphorus and the same dose of potash early in the spring yielded a harvest increase of only 1.9 quintals per hectare, the root method disk seed drill application yielded 3.8 quintals.

Early spring application of phosphorus-potash fertilizer under winter wheat sown after corn for silage did not provide a noticeable harvest increase. Since a considerably higher effect can be obtained from nitrogen fertilizers alone during late spring vegetation renewal, it is more convenient to utilize present phosphorus and potassium reserves under other grain crops.

Our institute research indicated that in the beginning period of winter wheat development a moderate nitrogen feeding is essential, and an adequate feeding is needed in the late phases of vegetation when it aids the maximal development of plant productivity elements. In 1977, application of nitrogen fertilizer in the plant stem elongation and heading phases (after peas for seed) provided for a harvest of "Illichivka" winter wheat of 82.9 quintals per hectare. The increase amounted to 22.6 quintals. Protein content increased by 3.38 percent, and its harvest per hectare by 4 quintals. Gluten content equalled 32.9 percent, and in some variants reached 38 percent. In 1978, the harvest after peas for seed amounted to 78.5, and after corn for silage 71.7 quintals per hectare. The increase equalled correspondingly 14 and 21.3 quintals.

It is typical that in last year's droughty conditions nitrogen fertilizers applied during the late phases of winter wheat vegetation were not any less effective than those applied prior to sowing. Harvest increase in both cases was equal. In Odesskaya Oblast conditions, according to data from the All-Union Selection-Genetic Institute, nitrogen application during the plant stem elongation and heading phase in the "Prybiy" and "Odesska-51" varieties (after clean fallow) was much more effective than the prior to sowing application. This data is confirmed by production review on the elite institute farm, and in the republic's many kolkhozes and sovkhozes. For example, in the Kagarlitskyy Rayon, Kievskaya Oblast, nitrogen application in 1978 over an area of 3,800 hectares in the stem elongation and heading phase provided for a marked grain harvest increase. Nitrogen fertilizers (30-40 kg activated substance per hectare)in this method of top dressing should be applied at the end of the spring tillering stage with seed drills, that is by the root method, and a second time (50-60 kg per hectare) from an aircraft at the beginning of heading.

An important element in winter crop care is the battle with weeds. Chemical weeding is very effective. The best time for the application of the herbicide group 2,4-D is the spring tillering period. The norm for applying amine salt 2,4-D is 0.6 - 0.8 kg activated substance per hectare. For sodium salt and esters it will be 1.1-1.5 and 0.4-0.5 kg. The crops should be worked at a temperature of at least 12 degrees warmth.

The weeds die off completely when mixtures of herbicides are used: 0.5 kg amine salt 2,4-D and 0.2-0.5 chlorcrotyl ester 2,4-D, or a mixture of ester with amine salt 2,4-D. If daytime temperatures are higher than 16 degrees only amine salt 2,4-D can be used.

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TILLING AND CROPPING TECHNOLOGY

MEASURES FOR SPRING FIELD WORK EXPLAINED

Kiev SIL'S'KI VISTI in Ukrainian 1 Apr 80 p 2

[Advise of Ukr SSR Ministry of Agriculture, Southern Section VASKhNIL on: "Timely and Skillful Conduct of Spring Field Work"]

[Text] The republic's farmers are working hard to fulfill this year's socialist commitments in grain production and its sale to the state, markedly improve the feed basis, and provide for speedy livestock-raising development. Spring sowing technology is in a better state than last year. Kolkhozes and sovkhozes are fully supplied with high-quality sowing material.

What is unusual this year is that corn, sunflowers, soybeans and several other crops will be raised according to new technology over a considerable area. Getting ready for it, farms are completing technology preparation, are bringing in mineral fertilizer, herbicides and are making the necessary adjustments. Specialists and machine operators were instructed everywhere on the cultivation of the above mentioned crops in a different manner.

Success in spring field work will depend to a large extent on the creative approach of specialists, machine operators and rural workers towards its fulfillment with specific weather conditions this year in mind.

Cool weather, snow covering over a marked area of the republic's territory and deeply frozen soil require a delay in sowing, especially in the southern oblasts. Sowing dates for early and late varieties are, therefore, close together, which will cause a lot of pressure in conducting field work.

Data collected over many years show that a rapid temperature rise is possible when spring is delayed. This will complicate the winter crop growth after plant vegetation renewal, weakened during wintering, and can also lead to marked moisture losses.

In some oblasts winter crops wintered in conditions of prolonged ice crust formation over part of the area, marked air temperature fluctuations and temperature drops to a critical level for poorly developed crops.

Therefore, particular attention must be paid to our most important grains-winter crops. "SIL'S'KI VISTI" (dated 2 Feb 1980) already wrote about the care they need in the winter-spring period. Managers and specialists must now, in addition to that advice which was published, fulfill a series of additional organization-agrotechnological measures.

Providing nutrients for winter crops, differentiated top dressing according to the crop condition and within specific dates are of particular importance. Aircraft should be utilized more effectively for this purpose and appropriate above ground methods of fertilizer application. Heavy technology, tractors and RUM type fertilizer spreaders should not be used on weakened crops because they can damage them.

To lengthen the top dressing period, root top dressing should be used widely, which allows for the enfolding of fertilizer in soil to a depth of 3-5 cm. At the beginning of winter crop vegetation renewal, the condition of the crop must be carefully inspected on all farms so that fields to be reseeded or overseeded may be determined early. A basic indicator for the plant's ability to live is its newly formed root system. During inspection, crop pest infestation, or crowding with weeds should also be noted. Inspection results determine additional measures, directed first of all towards faster rooting and growth of the above ground winter crop mass, and also obtaining a larger qauntity of grain of strong and valuable wheat.

Special attention should be paid to the condition of crops which were under an ice crust for a long time. Overseeding and reseeding must be done within specific dates making sure of the correct sowing norm and the depth of seed covering. Seed drills equipped with special shovels are used for overseeding.

Considering that during late spring, as a rule, there is less intensive development of the vegetative mass and this leads to weed crowding, crops should be treated with herbicides.

Winter crop harrowing should also be approached creatively, differentially, taking into account conditions of crops and soil. This agricultural measure should be accomplished in the best possible time, when the soil is easily loosened with selected, proper equipment.

An important prerequisite for obtaining high yields of spring grain crops is the maximal retaining and effective use of moisture, decreasing the time needed for the fulfillment of the whole complex of field work with adherence to agrotechnological requirements. Technological operations and wide-sweep aggregates should be combined more frequently to prevent moisture loss.

Work tempo should never be increased at the cost of lowering the quality During soil working, fields should be carefully leveled, the fertilizer must be well covered with a firm seed bed covered at the proper depth. On each farm sowing must be done with adherence to the optimal sowing norm, avoiding crowding and especially thinning.

Beet growers also have a lot of work. To obtain timely and even shoots of sugar beets during a rapid air temperature rise, special attention must be paid to their sowing dates. This year it should be done at the same time as early grain crops and within maximally brief dates, 4-5 days. A basic indicator in determining optimal sowing dates is the soil's physical readiness permitting the accomplishment of this measure after presowing area tilling. It should be remembered: a delay in sowing beets can lead to uneven, thinned shoots, decreasing plant density, lowering the yield and root sugar content.

When industrial progressive technologies are widely applied in raising corn, sunflowers and other crops, it is very important to level the fields, permitting quality sowing and effective herbicide use. With this in mind, farms should be equipped with a sufficient number of land levellers and soil smoothing equipment.

Last year when industrial technology was used in growing corn, some farms allocated the crop improperly after predecessors, soil levelling and herbicide application was inadequate, prescribed seed sowing norms were not adhered to. These shortcomings cannot be repeated this year.

To obtain abundant, guaranteed harvests of corn seed and other crops on areas where progressive technology will be applied, it is essential to sow recommended hybrids and varieties, providing for corract plant density.

It is importnnt to use chemically-treated seed for sowing all spring crops. We must remember that adherence to seed chemical treatment technology provides for an additional 5 to 10 percent harvest.

Everything must be done for a sharp harvest increase and an increase in the gross yield of buckwheat and millet. To achieve this, first of all the needed sowing area must be provided as well as a high level of agrotechnology.and

A large reserve in grain and other agricultural production is the correct utilization of reclaimed lands. All irrigated areas should be equipped with brigades, teams and detachments. The need for earlier watering cannot be excluded this year, which calls for preparation of watering technology and finding members for the teams.

Feed crops require the continuous attention of farm managers and specialists. To provide an early feed harvest, all kolkhozes and sovkhozes must sow mixtures of grain-pulse grasses early, the soil under perennial grasses must be loosened and top dressed with mineral fertilizer; if possible, a watering should be done too. All feed crops are handled by brigades, teams and detachments equipped with suitable technology.

The spring period must be fully utilized also for increasing feed production on natural agricultural lands through surface improvement, top dressing with organic fertilizer, manure; thinned grass stands should definitely be overseeded.

Experience shows that almost every year in both early and late spring the soil warms unevenly. Therefore, each farm must watch the conditions on its fields in order to begin the work selectively. It must be remembered that the success of spring field work is not determined by days but by hours.

This spring it is especially important to provide for correct work organization, making use of highly-productive technology. Aggregate work must be arranged so that they could work not only in the daytime but also at night. The group method should be used widely to complete specific operations, complex detachments for soil working and fertilizer application should be organized. Rural workers are bound by honor to conduct high-quality spring field work within specific dates.

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AGRICULTURE

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22 May 1980

USSR REPORT

AGRICULTURE

No. 1234

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COLD APRIL WEATHER AFFECTS MOST OF USSR

Moscow SEL'SKAYA ZHIZN' in Russian 20 Apr 80 p 6

/Article by Ye. Chistyakova, research associate of the USSR Hydrometeorological Center: "April 'Escapades'"/

/Text/ The weather in April, the transitional month from winter to summer, is notable for great changeability. Among the people the caprices of the weather during this month are called April "escapades." Here, too, are the first thunderstorms, which can alternate with snowfall, as was the case in early April 1968. At times hurricane winds can also suddenly appear. A wind velocity of 34 m/sec was recorded in Moscow in the middle of April 1967. Frequently after warm spring weather sets in the fields again turn white with snow, blizzards whirl, the ground turns hard. In recent times a snow cover appeared in the second half of April in 1971, 1974, 1978 and 1979.

The spring of this year is also not causing joy with warmth. Cold air from the north of Greenland, one of the coldest regions of our planet, swooped down on the European territory of our country. The strong meridian streams, which formed in the atmosphere, were conducive to the rapid movement of this air from the north to the south. In Murmanskaya Oblast, the northern part of Arkhangel'skaya Oblast and the Komi ASSR the temperature fell to -17° to -20°.

In the lower 5-km layer of the atmosphere the temperature fell by 15-20°. At an altitude of 1 km over Moscow, for example, the temperature reached -10° to -12°. Therefore even the bright sun was not able to warm the air which was circulating near the earth's surface.

For the central belt of the European territory a cooling trend in mid-April is not so rare a phenomenon. In the past 88 years of observations 34 times during these days in April the weather was cold, in approximately half of these Aprils the temperature at night reached -5° to -10°. And last year at this time it was also cold. For nearly a week the temperature at night was -6° to -9°.

A cooling trend in the southern regions during April occurs more rarely. But a delay of spring in the Ukraine is also frequently noted--once every five years. Cold weather penetrates Transcaucasia considerably more rarely. For example, in recent days the temperature fell sharply in Armenia. It also turned cooler in Georgia, but in the main regions, where active vegetation has begun, frosts have not been noticed. The cooling trend in Azerbaijan was accompanied by rains, which were especially strong in Lenkoran'-Astarinskiy Rayon, while in the Nakhichevanskaya ASSR even snow fell. A sharp change in the weather is also now taking place in Central Asia. After 10 days of stable and hot weather, when on some days the maximum temperature in Tashkent and Frunze reached record highs, a decrease of the temperature by 13-17°, considerable rainfall and an increase of the winds are anticipated. Mud flows might occur in the mountains. Night frosts are possible in the northern regions of Turkmenia and Uzbekistan.

Unusual in its intensity and more typical of the winter season, this low-pressure area has brought bad weather to the regions of the Volga, the Volga-Vyatka Region, the Central and Southern Urals and the Central Region.

The prospect of an improvement in the weather has now begun to show. On the European territory of the USSR a shift of the air from the west and southwest is anticipated, which will lead to an increase of the daytime temperature to +6° to +11°.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BASHKIR WEATHER, PREPARATION FOR SPRING SOWING

Moscow IZVESTIYA in Russian 17 Apr 80 p 1

/Article by R. Bikmukhametov (Bashkirskaya ASSR): "The Order for the Harvest"/

/Text/ The current spring has brought the farmers many surprises. Its stormy start made it encumbent to increase sharply the rate of repair of the sowing equipment. But a week later the weather "calmed down," and then turned completely around: to snowfalls and blizzards. But, as they say, every cloud has a silver lining. First, the fields received a good addition of moisture and, second, all the equipment is practically ready to go out into the field.

However, all this does not at all mean that the future sowing will be easy and smooth. It is worth recalling if only the winter, the almost snowless and severe start of which also greatly worried the rural workers. The plants, which were barely covered by a thin blanket of snow, felt uncomfortable under the blows of the hard frosts. A significant portion of the winter sowings suffered greatly, therefore the areas, which it is necessary to sow with early cereal crops, increased by nearly 350,000 hectares. Moreover, in many rayons the soil froze to a great depth, which unquestionably will also complicate the work of the grain growers.

The republic party organizations and the local soviets are not forgetting these circumstances. All the organizing and ideological work is aimed at carrying out the spring sowing in the optimum time according to a rigid schedule and with the strict observance of the entire set of agrotechnical methods. The advanced know-how of the best farms of Ilishevskiy, Dyurtyulinskiy and Aurgazinskiy rayons is being promoted in detail and extensively.

And there is truly something to learn from them. I had occasion to visit the Kolkhoz imeni K. Marx and the Pobeda Kolkhoz of Dyurtyulinskiy Rayon. Not only the sowing equipment, but also all the combines have been placed on the line of readiness here. First-class seed has been prepared. This spring the fields will receive twofold more organic fertilizer than last year. To this it should be added that all the sowing units are manned for operation in two shifts by skilled machine operators, who have recently been certified.

"We have examined and thought over all the details of the future sowing, relying on the experience of our neighbors, the recognized experts in the cultivation of large crops from Ilishevskiy Rayon," relates First Secretary of the Kushnarenkovskiy Rayon Party Committee F. Mullagaliyev. "The analysis of the work of the farms of the rayon in the past years and the comparison of the results with the deeds of the Ilishevskiy Rayon farmers helped to identify our shortcomings. One of them is the frequent violation of the optimum period of sowing. Another is the low standard of farming, particularly the low quality of the preparation of the fields, careless sowing and the inept use of fertilizers. If we make these reserves work for the harvest, the yield of each hectare will increase by 5-5.5 quintals."

"Our order for the harvest is now great," says F. Khusainov, manager of the sowing link from the Kolkhoz imeni Sverdlov. "We should raise 30 quintals of grain on each hectare. We have done much for this. The equipment, which is united into three large complexes, has been carefully readied. The adjustment links will work under the guidance of the unified dispatcher service. The main thing remains--to carry out the sowing with a high quality in 84 hours."

Such are the orders for the harvest during Lenin's anniversary year at many republic farms, and they have been backed by thorough preparation, skillful calculations and reliable agronomic tactics.

In speaking about the serious work now being performed in Bashkiria on the introduction of advanced know-how, I want to note another interesting feature of this spring. At some competing farms it has been decided in accordance with the progress of all types of field operations to enter their results in unique passports in order to compare the results later, after the harvest. It seems that this interesting experiment will make it possible to identify new reserves for increasing the yield of the fields.

But still they are not preparing for the spring test everywhere with such responsibility. About what advanced know-how is it possible to speak, if at some farms of Arkhangel'skiy, Al'sheyevskiy, Baymakskiy, Yanaul'skiy and several other rayons so far 30-40 percent of the sowing equipment has not been repaired, a considerable portion of the seed has not been brought up to the necessary conditions?

There is still time. The farmers of Bashkiria have all the means to lay an excellent foundation for the harvest at all the kolkhozes and sovkhozes without exception.

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SPRING SNOWS IN SOUTHERN, WESTERN SOVIET UNION

[Editorial Report] In Moscow SEL'SKAYA ZHIZN' in Russian 18 Apr 80 p 4 reports snow has continued into the second half of April in some areas of the southern and western Soviet Union. A TASS announcement referred to snow falling on 17 April in Armenia: "Usually April is a time of blossoming fruit trees, the air temperature warms up to 20 to 25 degrees. It is truly unusual to see snow on the green leaves.

"The largest amount, up to 25 centimeters, was registered in the mountainous areas, where the thermometer showed 9 to 12 degrees below zero. In the Ararat Valley the soil temperature dropped to minus 2 degrees.

In Moscow SEL'SKAYA ZHIZN' in Russian a short article describes the Moscow area weather. "Snow falls, blasts of icy air, the sky in heavy clouds, this was the way Moscow looked last week. But on Sunday [20 April] it warmed up...."

In Vilnius SOVETSKAYA LITVA in Russian 23 Apr 80 p 1 a review from Lithuania discussed field work going forth and adds: "However on Saturday and Sunday [19 and 20 April] snow fell and it got cold. Work on preparing the soil and sowing was suspended in some places...."

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SEED STOCKS ADEQUATE FOR SPRING SOWING

Minsk ZVYAZDA in Belorussian 30 Mar 80 p 1

[Article by P. Rusakow: "Complete Readiness for Spring Sowing"]

[Text] Soon the planting crews will be taking to the fields. This year kolkhozes and sovkhozes have resolved to produce a per-hectare average of not less than 32 quintals of grain, 190 quintals of potatoes, 270 quintals of sugar beets, 5.4 quintals of flax fiber, and 190-200 quintals of vegetables.

The first and principal way to achieve the stated goals is a substantial increase in yields of all farm crops on the basis of further improvement in the crop acreage structure, efficient utilization of mineral and organic fertilizers, and improvement of farming practices. Of particular importance is selection of varieties and seed quality.

The entire required quantity of seed for spring planting of cereals and legumes in this republic is available. On the kolkhozes and sovkhozes of Ivatsevichskiy, Drogichinskiy, Stolinskiy, Orshanskiy, Khoynikskiy, Grodnenskiy, Mstislavskiy, Soligorskiy and other rayons all seed stocks are high-quality, while total barley seed stocks meet the requirements of first-class condition.

Good management concern is being shown for seeds stocks in the majority of rayons in Brestskaya Oblast. In this oblast the plan target was met ahead of schedule for putting away both primary and reserve seed stocks, and seed stocks have been brought to high condition. Almost 76% of seed grain is first-class. This is the highest figure among the oblasts of this republic. A particularly good job has been done on preparing barley seed, 87% of which meets the highest quality standards. At the same time there still remains much to be done in this oblast in order to bring up to high planting condition flax seed and perennial grass seed. The farms of Baranovichskiy, Maloritskiy, and Pruzhanskiy rayons are particularly behind in this area.

Concern is aroused by the fact that up to the present time many kolkhozes and sovkhozes are not fully supplied with leguminous crop seed. Mogilevskaya Oblast contains the greatest number of these farms. The situation is no better as regards perennial grasses. One fourth of the farms which plant flax do not have the requisite quantity of fiber flax seed. The kolkhozes and sovkhozes of Berezovskiy, Zhabinkovskiy, Slutskiy, Belynichskiy, and Osipovichskiy rayons are less than half-supplied with buckwheat seed.

Many farm managers and specialists have failed to show adequate concern for insurance seed stocks. Only Brestskaya Oblast fully met the target for putting away cereal and legume insurance seed stocks. Practically nothing has been done toward this end in Gorodokskiy Rayon. This problem is being resolved to a no better degree in Sharkovshchinskiy, Berezinskiy, and Cherikovskiy rayons.

Particularly disturbing is the fact that on some farms the laid-away seed stocks have still not been brought up to a high planting condition. For example, a check conducted on the Rasyya Kolkhoz in Smorgonskiy Rayon and the Svetly Shlyakh Kolkhoz in Mogilevskiy Rayon revealed that all legume seed is nongrade. Similar poor management was observed on the Zara Kolkhoz in Lidskiy Rayon and on the Sovkhoz imeni Michurin in Chervenskiy Rayon, which had put away flax seed which is unsuitable for planting. Perennial grass seed is also of poor quality on the Maladaya Gvardyya Kolkhoz in Iv'yevskiy Rayon, on the Zapavety Lenina Kolkhoz in Dyatlovskiy Rayon, and on the Geroy Pratsy Kolkhoz in Klimovichskiy Rayon.

No less attention must be devoted to preparing oats for planting. This crop occupies an important position in the grain balance. It is true that the seed layaway target was met, but unfortunately less than half of the seed is first-class. The worst job in this regard was done by the kolkhozes and sovkhozes of Beshenkovichskiy, Verkhnedvinskiy, Glubokskiy, Belynichskiy, Klimovichskiy, Slonimskiy, and Gantsevichskiy rayons.

Preparation of buckwheat seed is proceeding slowly, and a large quantity of this seed is nongrade. The situation is particularly alarming on the farms of Gomel'skaya Oblast. In this oblast they are supplied barely half with this seed, while only one fourth is graded to first class. In Beshenkovichskiy, Gorodokskiy, Svislochskiy, Goretskiy, and Krasnopol'skiy rayons there is essentially no first-class flax seed.

The facts indicate that farmers must still accomplish a great deal of work in order to complete preparation of seed. And there is not a single day to waste in this important activity. This means that more strict demands should be placed on agronomist service specialists and farm managers in order to get this task accomplished.

Fertilizer is of the greatest importance in the group of agricultural measures to increase crop yield. At the present time the rate of preplant application is somewhat greater than that of last year. They are falling behind schedule in hauling organic fertilizers to the fields, however, in Kamenetskiy, Orshanskiy, Dubrovenskiy, Mogilevskiy, and Kostyukovichskiy rayons.

It is possible to perform all planting operations in a timely manner and with excellent quality only under the condition that equipment is fully ready to go and with considerable skill on the part of machinery operators. They are well acquainted with this truism on the Paryzhskaya Kamuna Kolkhoz in Braginskiy Rayon, but they do not put it into practice. They have not yet completed tractor overhauls and repairs. The Iskra Kamunizmu Kolkhoz in Borisovskiy Rayon is doing no better a job of readying equipment. There are similar deficiencies on other farms.

Assignment of tractor drivers to equipment for two-shift operations should already be completed. This important task has not yet been completed, however, on all farms. In 14 rayons in this republic there is only enough manpower available for one driver per tractor, while figures are even worse in Verkhnedvinskiy and Leznenskiy rayons.

As planting time draws near, rural Communists are called upon to do everything necessary to ensure that each and every kolkhoz and sovkhoz begins the spring planting fully equipped and performs it with the very highest quality.

3024
CSO: 1824

CORN CULTIVATION IN NORTHERN CAUCASUS

Moscow PRAVDA in Russian 14 Apr 80 p 1

[Article by V. Artemenko (Severo-Osetinskaya ASSR): "A Test for Skill"]

> [Excerpts] The farmers of the Northern Caucasus will be growing corn for the first time by industrial technology on large areas. In Northern Osetia, for example, 45,000 out of the 48,000 hectares are being planted in this way.
>
> It should be noted that last spring the new technology had already been tried out at seven farms on 4,000 hectares. But at that time only a portion of the corn growers were familiar with it. Now everyone has studied the innovation: party and managerial workers, specialists and machine operators. Representatives of Northern Osetia visited Moldavia and Kabardino-Balkaria. Seminars were held at the Northern Caucasian Scientific Research Institute of Alpine and Piedmont Agriculture and the Gorskoye Institute of Agriculture. Training was carried out in all the rayons.
>
> A republic conference of corn growers was held a few days ago. They set their tasks for the current year--to obtain 34.5-35 quintals of grain corn from each hectare, to harvest not less than 165,000-170,000 tons of it and to sell to the state 93,000 tons of seed for other zones of the country. The task is difficult, but feasible. At the conference the managers of 203 links approved the conditions of the socialist competition. Eleven collectives assumed the obligation to obtain not less than 100 quintals of grain corn per hectare, and 29 collectives--70 quintals.

Unique presowing rehearsals are now under way at the corn growing farms of the autonomous republic.

In Mozdokskiy Rayon, which is located in an area of insufficient moistening, the supply of the soil with water is now being carried out. Work in two shifts has been organized for the watering. Party groups, which will also head the competition for the successful performance of the watering and sowing, have been set up in every mechanized corn growing detachment.

On the whole the farms of the republic met the spring period of hard work well. The planting of potatoes and the sowing of peas and fodder crops were completed successfully. The kolkhozes and sovkhozes of Ardonskiy and Prigorodnyy rayons began well the sowing of spring crops. And still it was not possible to get by without disruptions. Not all of the specialists learned, for example, the new technology of cultivating corn. Now their certification is under way. Of the 77 agronomists who took the exam, 17 received unsatisfactory marks.

The industrialization of the corn field requires much new equipment. The city people have come to the aid of the country people. The patrons have manufactured 700 sections of graders and about 100 units for applying herbicides. But there are not enough tractors, heavy disc harrows and general-purpose mounted drills.

"The supply enterprises are letting us down," says Severo-Osetinskaya ASSR Minister of Agriculture P. Tedeyev. "For example, during the first quarter the Sibsel'mash Plant should have shipped spare parts for the repair of heavy disc harrows. The deliveries have been upset. The Rostov Krasnyy Aksay Plant, which has not begun the shipment of spring-tooth harrows, has done the corn growers the same kind of 'favor.' The RSFSR State Committee for the Supply of Production Equipment for Agriculture is poorly monitoring the work of the supply plants."

This season will be a rigorous test for the experts of the corn fields. Whoever is able to observe all the details of the industrial method will pass it. Great efforts and accurate work will be required of every party and economic manager, specialist and machine operator.

7807
CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

CORN GROWING TECHNIQUES, THIS YEAR'S CONDITIONS DISCUSSED

[Editorial Report] In Kiev SIL'S'KI VISTI in Ukrainian of 30 April 80 p 1 carries a round table discussion on new industrial methods for growing corn. Whereas last year these methods were employed on only 20,000 hectares, this year their area of employment has been expanded to 380,000 hectares. Moreover sowing has been going forth under adverse weather conditions, requiring special precision in the work of the corn growers and a creative differentiated approach to matters in each case.

First deputy minister of sovkhozes for the Ukrainian SSR A. P. Lysenko refers to this year's delayed spring and notes that weather conditions forced the beginning of spring field work back by 2 to 3 weeks from past years. In connection with a insufficient warming of the soil there has been a corresponding delay in the sowing dates for corn. These factors naturally demand corresponding adjustments in the workers' plans.

Deputy head of the southern department of VASKhNIL O. O. Sobko goes into more detail on pre-sowing conditions:

"Under this spring's conditions the formation on the surface of the soil of moist clumps, which have a negative effect on herbicide effectiveness, sowing quality and the attainment of even corn sprouts, may be observed when putting herbicides down with disk type implements. In this connection in certain cases pre-sowing cultivation...will be necessary after the herbicide is applied and worked into the soil.

"At this time in the majority of the steppe zone oblasts in the republic the calendar sowing dates for corn have already passed. Therefore it should begin immediately as soon as the soil temperature is stable temperature of 8 to 10 degrees in the plowed layer. This work should begin with corn for green chop and silage. But corn for grain should begin with more cold resistant hybrids (early ripening, multiline), less sensitive to low temperatures. Seed of lower germination capability (but not lower than second class standard) is best sown on good stably warm ground toward the end of the optimum sowing dates."

Director of the All-Union Scientific Research Institute for Corn V. S. Tsykov notes one other factor:

"In connection with the decreased nitrogen fixation capability under conditions of the cold spring the supplying of the corn plants with nitrogen nutrients takes on a special importance...."

CSO: 1811

MAJOR CROP PROGRESS AND WEATHER REPORTING

GRAIN GROWERS ADVISED ON TOP DRESSING OF WINTER CROPS

[Editorial Report] In Kiev SIL'S'KI VISTI in Ukrainian of 29 Apr 80 p 1 advice is offered and instructions to grain growers on techniques for various areas and situations.

"The time has now come for application of fertilizer to the roots with disk-type seed drills.

"Under this year's conditions when, as a result of frequent precipitation the soil in many fields in compacted, this progressive mode of top dressing is especially effective. It makes it possible to put the fertilizer down into the soil and simultaneously loosen the surface...."

"On stands damaged by the ice crust with well-developed plants it is feasible to combine root top dressing with overseeding of winter drops in the depressions [blyudtsi]...."

CSO: 1811

MAJOR CROP PROGRESS AND WEATHER REPORTING

BELORUSSIA FIELD WORK PROGRESS, PROBLEMS

Minsk ZVYAZDA in Belorussian 18 Mar 80 p 3

[Articles by P. Russakov: "Farmer, Do Not Delay"]

[Excerpts] At the initiative of leading farms, a vigorous campaign is in progress to obtain a big harvest in the final year of the five-year plan. Farmers are enthusiasticly adopting the know-how of the right-flankers.

The farmers of Kletskiy Rayon, for example, are building a reliable foundation for a big harvest. They are completing the target pertaining to applying organic fertilizer to the fields. The farms of Dokshitskiy Rayon are proceeding with this activity at a rapid pace: up to 10,000 tons of fertilizer per day is being hauled into the fields for preplant application. Thanks to shock-work labor by the mechanized teams and detachments, considerably more fertilizer has been prepared and applied than last year. The kolkhozes and sovkhozes of Uzdenskiy, Shumilinskiy, Lel'chitskiy, Luninetskiy and other rayons are working equally diligently to accomplish the task of improving land fertility.

Success is favored for those who have correctly organized placement of personnel and who utilize equipment in a highly productive manner. This is attested by the experience of the Novaye Zhytstsye Kolkhoz in Korelichskiy Rayon. They have formed a mechanized detachment, assigned to it the most experienced farm machinery operators, and have furnished it with the requisite equipment. Skilled work organization, continuous monitoring of job performance, and good organization of socialist competition have ensured success. This kolkhoz already has applied more than 25 tons of organic fertilizer per hectare on acreage to be spring-planted.

For the republic as a whole, the pace of this work is improved over last year. The kolkhozes and sovkhozes have prepared more than 62 million tons of fertilizers. The farms of Minskaya Oblast have overfulfilled the fertilizer preparation target, while the farmers of Vitebskaya Oblast have achieved the top figures in field application.

Many farms, however, are performing this work below their capabilities. Many kolkhozes and sovkhozes in Kamenetskiy Rayon have shown an especially slow pace of securing and applying organic fertilizers. Volozhinskiy, Glubokeiy, and Dobrushskiy rayons are also lagging considerably behind. This is a consequence of poor equipment utilization and poor organization of machinery operator labor.

Certain farm managers and specialists are putting off preplant application of organic fertilizers to the last minute. This is an incorrect, erroneous approach to this activity. Every farm has the task of applying organic fertilizers to the fields prior to commencement of spring planting operations.

Much has also been accomplished in the area of readying seed. All oblasts have met their seed layaway targets. Now it is extremely important to make sure that all seed is brought up to first-class condition. Up to the present time, however, certain farm managers and specialists as well as local Soviet and agricultural agencies have failed to attach adequate importance to this matter. This alone can explain the fact that the procedure of bringing seed up to top condition is proceeding very slowly. In Verkhnedvinskiy Rayon, for example, only one fifth of total seed stocks of cereals and legumes is in first-class condition.

The status of flax seed evokes particular concern. Some farms do not yet have enough seed for their total acreage to be planted to flax. A considerable quantity of flax seed is below-condition, chiefly due to degree of cleanness. A similar situation prevails with perennial grass seed. We cannot accept this situation. It is the first and primary obligation of agronomists to take prompt steps to ensure that in these next few days seed cleaning is completed and seed is brought up to first-class condition. Seed dressing must also be performed without delay.

Among the many present concerns of our rural workers, prompt completion of equipment overhauling and repair remains a principal item. It is true that many farms and entire rayons have done a good job and have put on ready status all cultivating and planting equipment. Nevertheless, not all farm shops are keeping up with their work schedules. This leads to failure to complete readying of equipment on schedule. Grain combine harvesters are being repaired and overhauled particularly slowly. A poor job is being done in this area by the kolkhozes and sovkhozes of Berezinskiy Rayon. In this rayon a large number of tractors are not yet ready to take to the fields, the combine repair and overahul schedule is not being met, and potato planters are being readied for service with delay. Quality of overhaul and repair is also poor in places.

Time does not stand still. The spring field work is approaching. Farm managers, party organizations, local Soviet and agricultural agencies must do everything necessary to ensure that farmers take to the fields in full combat readiness.

3024
CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

COTTON SOWING--Chimkent, 11 Apr--The mass sowing of cotton has begun in Chimkentskaya Oblast. The farmers of Kelesskiy, Chardarinskiy and Kirovskiy rayons were the first to bring the sowing equipment to the fields. At the farms of Kelesskiy Rayon 2,200 hectares have already been sown--one-fourth of the planned area. The brigade of Maden Bukharbayev from the Sovkhoz imeni Gani Muratbayev needed three workdays to complete the sowing. Last year this collective harvested 38.7 quintals of cotton from every hectare, while now it has resolved to obtain 50 quintals. Another 120 mechanized brigades have planned to exceed this mark. Precision seeding machines are being used everywhere during the planting, phosphorus and nitrogen fertilizers are being applied to the soil at the same time as the seed. Now the oblast farmers have decided to increase the area of cotton to 125,550 hectares, which is 6,550 hectares more than were taken up by it last year. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 12 Apr 80 p 1/ 7807

WINTER CROP CARE--Rostov, 11 Apr--The snow has left the fields of the oblast. Not letting the good moment pass, the farmers have begun to take care of the sowings of winter crops. They have skillfully organized top dressing of winter crops in Tselinskiy Rayon--one of the major suppliers of wheat of the strong and valuable varieties. Some 300,000 hectares were top dressed, and with allowance made for the autumn-winter season--about 1 million. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 12 Apr 80 p 1/ 7807

ASTRAKHAN' SPRING FIELD WORK--Astrakhan', 12 Apr--The field work in Ikryaninskiy, Kamyzyakskiy, Narimanovskiy and other rayons of the oblast is picking up speed. Early spring crops have already been sown on the first hundreds of hectares. Field work is being carried out on a broad front in Limanskiy Rayon. Grain corn will be cultivated here for the first time by industrial technology. Much attention in the rayon is being devoted to the fertilizing of the fields with local and mineral fertilizers. More than 60 tractors and trucks are engaged in the procurement and hauling of manure. Every day 1,250-1,300 tons of it are delivered to the irrigated areas. /Excerpts/ /Moscow SEL'SKAYA ZHIZN' in Russian 13 Apr 80 p 1/ 7807

WEATHER SLOWS PROGRESS--Odessa, 12 Apr--The unstable weather is complicating the performance of field work. The machine operators have to snatch literally hours to do some work in the field. In Kiliyskiy Rayon they quickly covered the moisture on the land plowed in the autumn. /Excerpt/ /Moscow SEL'SKAYA ZHIZN' in Russian 13 Apr 80 p 1/ 7807

AZERBAIJAN CROP SOWING--Azerbaijan SSR--First Secretary of the Bardinskiy Rayon Party Committee and Hero of Socialist Labor R. Safaraliyev relates: "Our rayon is the largest producer of 'white gold' in the republic. Last fall we turned over to the state 85,000 tons of raw cotton with a plan of 53,000 tons. We are thinking of exceeding even this mark." The communists and all the workers of the rayon are striving persistently for a high yield of the hectare. Before the sowing the plantations received nitrogen fertilizers, then phosphorus fertilizers along with organic fertilizers. Seed of high reproductions is falling on the soil almost everywhere. The farmers of Agdzhabedinskiy, Sabirabadskiy, Zardobskiy and several other rayons are skillfully using the machinery and every fine hour on the spring field. A peculiarity of the current period of hard work is the high standard of labor, the aspiration to use the seed and every hectare of plowed field economically. At many farms the unnecessary roads have been plowed up, the maps of the fields have been enlarged. All this made it possible to bring additional areas under cultivation. In the republic the sowing of corn for grain and silage and other crops is under way at the same time. The fodder field is also received good, timely care. The top dressing, harrowing and watering of alfalfa are continuing. The goal is being set to procure as much forage as possible and to increase its quality. /Excerpts/ /Moscow PRAVDA in Russian 13 Apr 8 p 1/ 7807

UKRAINIAN FIELD WORK--Kiev, 15 Apr (TASS)--The front of the field work in the Ukraine is expanding. Following the grain growers of the Crimea and Odesskaya Oblast the machine operators of Zakarpatskaya, Khersonskaya, Nikolayevskaya and Zaporozhskaya oblasts joined the sowing. Due to unfavorable weather the farmers went out into the field half a month later than usual. In order to carry out the sowing in the shortest possible time, combined technological operations are being performed and efficient wide-cut units are being used. Where conditions allow it, the equipment is being used round the clock. The Ukrainian grain growers have set for the last year of the five-year plan the goal to cultivate and harvest 53 million tons of grain--3 million tons more than the plan. /Excerpt/ /Moscow SEL'SKAYA ZHIZN' in Russian 16 Apr 30 p 1/ 7807

FIELD WORKER TRAINING--Orel, 15 Apr--The farmers of the oblast have to plant more than 600,000 hectares of early spring cereals. About 32,000 machine operators will take part in the spring work. It has been decided to carry out the sowing in only two shifts, quickly and with a high quality. About 4,000 tractor drivers, combine operators and drivers are being trained in courses of technical universal education in order to reinforce the detachment of machine operators. The next graduation of machine operators was held a few days ago at the Livny Promribor Production Association. After the four-month courses without leave from work 30 people received tractor driving licences. A considerable portion of the machine operators of the enterprise have already gone to the affiliated farms, where they will take part in the spring field work. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 16 Apr 80 p 1/ 7807

AGRICULTURAL AIRCRAFT OPERATIONS--Gor'kiy, 15 Apr--Taking advantage of the favorable conditions--warm, windless weather--the winged farmers are treating the grain crops and perennial grasses at the farms of Pavlovskiy, Kstovskiy, Sergachskiy, Pochinkovskiy, Arzamasskiy and a number of other rayons of the oblast. In all 55 crews, including 30 from the Novosibirsk and Omsk aviation detachments, will take part in agricultural work. They will top dress about 900,000 hectares of plantings of winter crops and perennial grasses. /Excerpt/ /Moscow SEL'SKAYA ZHIZN' in Russian 16 Apr 80 p 1/ 7807

CRANE RESCUE--A flock of cranes, which number 150 of these rare and beautiful birds, when returning from the south to their permanent nesting place, ran into trouble. This happened in Armenia. The weather suddenly turned bad on the territory of the republic. An icy headwind forced the worn out flock of cranes to land on the shore of Dzhogaz Lake. The birds tried to find here refuge from the weather and food. But the elements did not die down, there was no food. The builders, who had erected a dike on the lake, came to their aid. They put up tents, transferred the birds to them, warmed and fed them. And in the morning vehicles of the veterinary service stopped at the shore of the lake--physicians had come to the long-legged "patients." The struggle for the life of the birds went on for an entire week. Warmed by human heat, affection, they went out and stood on their feet. With the first warm days the flock took off and flew to the nesting places. /Text/ /Moscow GUDOK in Russian 27 Apr 80 p 4/ 7807

SOCHI COLD SPELL--Sochi--In the health resort city of Sochi it turned unusually cold. To the suprise of all, the roofs of houses, trees, bushes, streets and squares of the city were even covered with wet snow. And although it quickly melted, mixing with streams of spring rain, the breath of winter as before is felt in many things. The lush flowering of fruit trees and the sudden appearance of emerald green are not visible. Heavy clouds hang low over the Black Sea. "Here, of course, cooling trends were noticed previously during this season," relates Chief of the Sochi Hydrometeorological Bureau D. F. Lysak. "But there has not been one like this one in the past half century. For the first time we have recorded in our logs on the night of 16-17 April a negative temperature--minus 1° in Adlerskiy and Lazerevskiy rayons. But whereas in the city itself only wet snow mixed with rain fell, on Krasnaya Polyana and Mount Ochishkho--at places only 600 m above sea level--the depth of the snow cover reached 10 cm." Such a weather anomaly is explained by the abrupt arrival in the Black Sea region of very cold Arctic air. With a speed of 80-100 km/hr this northern newcomer burst into the comparatively warm Black Sea air and cooled it, creating at the same time persistent cloudiness. But let not those, who are getting ready to come here to rest, be discouraged. In the very next few days the warm spring sun will again shine over Sochi. /Text/ /Moscow TRUD in Russian 19 Apr 80 p 4/ 7807

ICE FISHERMEN RESCUED--About 300 winter fishing enthusiasts found themselves on two ice flows, which were being carried away by a storm wind into Lake Ladoga. Every day Radio Leningrad has reported several times that the ice in the Gulf of Finland and on Lake Ladoga is very cracked and it is dangerous to go out on it. Nevertheless this did not stop several ice fishing enthusiasts. To rescue the fishermen militia workers and military pilots, who had been put on the alert, had to promptly carry out this operation, in which six helicopters, boats and ambulances too part. As LENINGRADSKAYA PRAVDA reported, all the people in trouble were saved. But it involved both time and considerable risk for the pilots, the workers of the Administration of Internal Affairs and the many other Leningraders, who had to take part in the rescue operation. In the heavy helicopters under storm conditions the pilots hovered over the ice flows and lifted the frightened fishermen on board their crafts. /Text/ /Moscow TRUD in Russian 26 Apr 80 p 4/ 7807

CSO: 1824

LIVESTOCK FEED PROCUREMENT

IMPORTANCE OF FEED AS BASE FOR DEVELOPMENT OF LIVESTOCK BRANCH

Moscow PRAVDA in Russian 1 Apr 80 p 1

[Lead article: "Basis for Development of Animal Husbandry"]

[Text] The present period is a very busy one for the livestock breeders -- the period of indoor maintenance for the livestock is coming to a close. Thus, all measures must be undertaken to ensure that their productivity does not decrease and that a good foundation is laid for the successful fulfillment of the socialist obligations and plans for the final year of the five-year plan. The milk yields and weight increases are higher on those farms where greater amounts of forage are available and where it is utilized in a skilful manner.

During the July (1978) Plenum of the CPSU Central Committee, Comrade L.I. Brezhnev commented: "Everything that we wish to obtain from animal husbandry -- more meat, milk and other products -- is in the final analysis dependent upon sufficient feed being available, feed of diverse types and of high quality."

The country's forage resources are increasing. However, the volumes of forage procurements, expecially hay, haylage, silage and root crops, are still not satisfying the increasing requirements of animal husbandry. The program prepared during the July Plenum of the CPSU Central Committee for developing the feed base is still not being carried out in a sufficiently energetic manner in a number of rayons. Thus the party, soviet and economic organizations must raise the requirement for ensuring that the farms are supplied with high quality internally produced forage.

Recently the CPSU Central Committee and the USSR Council of Ministers adopted the decree entitled "Additional Measures for Increasing the Production of Coarse and Succulent Feed During 1980 and Raising Their Quality." The rural workers and the party, soviet and agricultural organs have been assigned the task of making the very best use of the reserves that are available for raising the yields of hay, haylage, silage and root crops and of further strengthening the forage base. Towards this end, additional amounts of equipment and materials are being made available and privileges are being extended with regard to the granting of loans for carrying out work and issuing labor incentives for feed procurements.

The kolkhozes and sovkhozes possess the potential required for creating a reliable supply of forage. They have vast areas of arable land, meadows and pastures. When efficient use is made of the land, many farms, for example those in Kiyevskaya Oblast, are obtaining 40-45 quintals of feed units per hectare. Many such examples can be cited. Nevertheless, skilful use is by no means being made of the reserves available in all areas. As mentioned in the decree, in the Mordovian ASSR and in Penzenskaya, Astrakhanskaya, Ternopol'skaya, Sumskaya and certain other oblasts, the average annual volumes of forage procurements during the current five-year plan, compared to the previous one, decreased or increased to only a negligible degree. Feed production is being carried out in a primitive manner in a number of areas. Quite often the grass yields are low and the pastures and haying lands are covered with undergrowth and are in need of improvement. Meanwhile, the plans for carrying out soil improvement work are not being implemented in all areas. One of the causes of low productivity in animal husbandry is the shortage of coarse and succulent feeds and it is the obligation of the farm leaders and specialists to achieve a considerable increase in the production of these feeds this season.

An equal amount of concern must also be displayed for the sown feed fields, since they also represent large reserves. For example, although many kolkhozes and sovkhozes in Uzbekistan are obtaining 120-150 quintals of alfalfa hay from an irrigated hectare, only one half this amount is being obtained under the same conditions in certain southern rayons of Kazakhstan and in the Turkmen SSR. More active use must be made of the experience of leading farms. When defining the crop structure prior to the commencement of the busy spring season, the agricultural specialists must determine the amount of forage required and the more productive crops must be planted. A bolder approach must be employed in expanding the areas for the growing of peas, alfalfa and soybeans, in the interest of covering the protein deficit, and secondary sowings must be employed, especially in the southern zone and under irrigation conditions. Special importance is being attached at the present time to allocating adequate quanitities of fertilizer for use on the feed fields. In addition, the soil and the seed must be prepared well and the agrotechnical requirements must be observed in a very strict manner. The efforts of the farmers should be directed towards obtaining fodder as early as possible for providing a dressing for the livestock and achieving a considerable increase in the productivity of the livestock.

Opportunities are to be found everywhere for raising the culture of the forage fields and their yields. At the same time, some economic leaders are utilizing these fields to only a very weak degree and they are trying to compensate for derelictions in organizing the production of hay, silage and root crops through the excessive use of grain, quite often at the expense of the state resources. The party and soviet organizations must not tolerate such practice. The growing material-technical base and the experience and knowledge possessed by the specialists and better farmers -- all of these factors must be directed towards accumulating maximum amounts of coarse and succulent feeds.

As mentioned during the November (1979) Plenum of the CPSU Central Committee, low feed quality and a lack of balance in the rations in terms of protein cause great harm to animal husbandry. According to data supplied by laboratories in Permskaya Oblast, for example, the procurements of hay, haylage and silage of the first and second grades constitute only slightly more than one third of the overall quantity being procured. Similar situations prevail in certain other oblasts. In commencing their sowing of forage crops in real earnest, the agronomists, zootechnicians and farm engineers must at the same time display concern for the timely harvesting of the crops. All measures must be undertaken at the present time to ensure that no delays are tolerated in the cutting down of the grasses and in the laying in of silage.

The task of raising the productivity of the fields and meadows and harvesting the crops in a timely manner represents only one half of the work. Importance is also attached to preserving the feed and preventing nutrient losses. Meanwhile, very few resources are being allocated in some rayons for the erection of reliable storehouses and the construction organizations are not handling the work volumes associated with the erection of the required storage facilities. Last year alone, the farms in the nonchernozem zone of the RSFSR failed to receive 1 million cubic meters of storage space for silage and haylage, erected on the basis of state investments. The rural areas are quite justified in expecting the farms to be properly supplied with highly productive units, synthetic film and different types of preservatives. It is the responsibility of the party organizations of the appropriate ministries and departments and plants to promote in an active manner the rapid mastering of the production of the entire complex of feed production equipment and resources.

One of the most important tasks confronting the rural party organizations is that of strengthening the forage base of the farms. The organizational and mass-political work being carried out by the communists must be subordinated to achieving this goal. The party committees and bureaus must actively employ moral and material incentives and mobilize all forces towards the creation of reliable supplies of feed. Each farm must be adequately supplied with diverse types of high quality forage.

7026
CSO: 1824

LIVESTOCK FEED PROCUREMENT

STRAW AS UNTAPPED RESOURCE FOR CATTLE FEED

Moscow PRAVDA in Russian 14 Jan 80 p 2

[Article by T. Dubonosov, senior instructor at the Kuban' Agricultural Institute, honored agronomist of RSFSR, and I. Lukin (nonstaff PRAVDA correspondent), Krasnodarskiy Kray: "A Stack of Straw"]

[Text] Wherever one travels at harvesting time, one sees stacks of straw everywhere on the fields. They extend in long lines behind the combines. At some farms, they are gathered immediately and taken to the farms, while at others they are just left there for the winter.

When the time comes to plant winter crops or plow the fields in the fall, the straw lets itself be remembered. It stands in the way of the plowing and sowing machines and forces the operators to make steep turns around it. How many weeds and pests find safe shelter in the stacks!

Just listen in on the conversations of supevisor and farm specialists in the harvesting season. Many of them complain: "There is no end to the problems with straw, nothing but trouble."

While the problem of mechanizing grain harvesting has been resolved in our country, we are not half way through with handling straw and chaff. One has only to see what is happening on the fields during harvesting to become convinced of this. The stacks of straw are pulled by the rakes, mixed with soil and leave twisted bundles on the strip, which cannot be torn apart by hand or plowed by machine. In many areas, the chaff simply scatters with the wind. Yet it is not significantly inferior to hay in nutrient value.

For several years now, all of the wheat and oat chaff has been gathered in Kuban'. The machine operators have equipped more than 15,000 combines with chaff collectors, and they obtain an additional 700,000-800,000 tons of feed annually. In the winter, the chaff is enriched with concentrates, vitamin supplements and it serves as a good aid in increasing cattle productivity. Now, barley chaff is also gathered there, and it is processed into granules.

However, the knowhow of the people of Kuban' is not being applied in all krays and oblasts. And is it worthwhile for each farm to invent the bicycle? Is it not simpler for plants to manufacture combines with chaff collectors. It is a strange situation: the machine builders hear out the claims of machine operators for years, but, as they say, they do not give a rap. Who then should take care of the machinery to gather the remainders on reaped fields? It would be enough to take half a ton of chaff from each hectare covered with cereal crops for the nation's farms to have an additional 50 million tons of nutritional feed.

At present, these millions of tons are disappearing without a trace. In some cases the straw stands for months, gets wet by the rain and rots. Feed, which is acquiring increasing importance for the formation of the fodder base of cattle raising, is being destroyed. Occasionally, fires were set in an effort to get rid of the straw. There are specialists who try to justify such action by stating that this is how they control pests and diseases. Yet many years of experience have been acquired, and it shows that fire results in more pests, rather than less.

We recall the early years of development of virgin lands in Russko-Polyanskiy Rayon of Omskaya Oblast, when the rustic shoulder-knot moth [Apamea sordens Hufnagel] appeared. It was decided to destroy it by fire. After threshing, the cuttings and stubble were turned. What happened? The following year there were even more of these moths. This is what occurred: by destroying them, they also destroyed the useful insects that controlled the pests. Instead of being beneficial, the idea resulted in damage.

As far back as the 1930's, academicians D. N. Pryanishnikov and V. R. Vil'yams suggested that more efficient use be made of the residue after reaping. Pryanishnikov believed that some of the straw should be used in composts or as fertilizer. He cited the following data: 18 tons of cuttings in podzole soil yield a 1.9 centner increment per hectare of winter rye harvest and 4-9 centers more oats.

Experiments of recent years have confirmed this scientist's conclusions. An additional 2-3 centners of winter wheat grain were obtained per hectare to which 5 tons of straw were added. The farms in Leningradskiy Rayon of Krasnodarskiy Kray add millions of tons of manure to the soil annually. They make wide use of straw to process it. They cut the straw, add liquid manure, haul it and stack it on the edge of the fields and at plowing time they apply 30-40 tons per hectare. Hence the result: even last year, when the weather conditions here were poor, a mean of 32 centners of grain crops were harvested, which is 8-10 centners more than in neighboring rayons--Kushchevskiy, Krylovskiy and Pavlovskiy.

V. P. Sergeyko, first secretary of the Leningradskiy raykom, Hero of Socialist Labor, tells us: "A million tons of organic fertilizer replaces

50,000-60,000 tons of mineral fertilizer. We never received such a quantity of mineral fertilizer, and apparently will not get it soon. Moreover, the effectiveness of manure is greater, while processing is cheaper and simpler. The only difficulty is in gathering the straw: we have no suitable machines. The straw has to be cut up and delivered to the farm in that form, or else immediately plowed in."

Now there are methods, the use of which makes it possible to transform stray into highly nutritional feed. Now, the nongrain part of the harvest becomes particularly valuable. However, in order to obtain this effect we need machinery. We need not only grinders, but the proper size wagons and standardized chaff collectors. Otherwise, the nongrain part of the harvest will be gathered by whatever means anyone devises.

In some countries, excellent paper is made of rice straw. In Kuban', for example, rice fields cover up to 176,000 hectares. This means there are hundreds of thousands of tons of straw. There is also quite a lot of straw in the rice paddies of Astrakhan', Crimea, Kazakhstan and the Far East. Virtually everywhere, the straw is simply brushed away. There is not enough manpower or equipment to gather it. One would think that the Ministry of the Paper and Pulp Industry should be interested in it. Its enterprises could collect millions of tons of raw material from the rice fields.

We should like to conclude this discussion about straw by saying that this is not simply dried out postreaping residue. This is feed, raw material for industry and a source for increasing soil fertility. This means that one should also use straw in a thrifty way with utmost effectiveness.

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CSO: 1824

LIVESTOCK FEED PROCUREMENT

USE OF STRAW FOR LIVESTOCK FEED URGED

[Editorial Report] Moscow TRUD in Russian on 27 February 1980 page 2 in a letter to the editor points up the value of straw as livestock feed. The letter from Gubkinskiy Rayon in Belgorodskaya Oblast, laments the fact that the straw remaining in the field after the grain has been mowed and thrashed is burned up with no regard for the fact that cattlemen then must send off to Orenburgskaya Oblast for straw, a distance of thousands of kilometers.

The writer goes on to make the distinction between the way this is handled in Belgorodskaya and neighboring Khar'kovskaya Oblast, where the combine is followed by a straw collector and valuable feed is not lost.

This is at least the third time during the recent winter that cattlemen in the RSFSR have been urged to look to straw to feed their animals. A December journal article and a January newspaper article, both from Krasnodar, carried a similar message. (Krasnodar SEL'SKIYE ZORI in Russian No 12, Dec 79 p 44; Moscow PRAVDA in Russian 14 Jan 80 p 2)

CSO: 1824

BRIEFS

DENSER CORN STANDS URGED--In Kiev SIL'S'KI VISTI in Ukrainian on 26 April 1980, page 1, an article appears which turns its attention to production of corn for green mass, the production of which has expanded greatly in the Ukraine in recent years. "...However, the level of yield attained by this crop still does not correspond to that required for the establishment of a strong feed base for animal husbandry. A major untapped resource for increasing yields and improving feed quality is the implementation of technology for growing denser stands of this crop for silage, in conjunction with rationally early sowing dates." The remainder of the article is devoted to details of this new technology, which will be implemented on 285,000 hectares. [Editorial Report]

FROM WOOD PULP WASTE--Article by G. Gubanov, special correspondent of IZVESTIYA, Rostov-na-Donu--The group of scientists and students of Rostov Institute of Agricultural Machine Building has developed an automatic line that produces 150-200 tons per day of a pulp and vitamin meal that is good feed for animals. Waste from timber logging and coniferous tree branches are the raw material. The first such line is already working well at the kolkhoz imeni Chapayev in Rodionovo-Nesvetayskiy Rayon. [Text] [Moscow IZVESTIYA in Russian 2 Feb 80 p 3] 10,657

CONIFER MEAL IN FEED--Rostov-na-Donu, 16 Feb (Yu. Maksimenko, correspondent of SEL'SKAYA ZHIZN')--Thousands of hectares are covered by young conifer forests in northern parts of this oblast. When the waste is shopped there, a carotene-rich feed is processed from conifers. The kolkhozes and sovkhozes of Tarasovskiy Rayon, who organized processing of conifer "tips" in local forests, deliver tens of tons of green concentrate daily to the farms. At the Svetoch kolkhoz, the pine needles are ground on feed processing machines and added to coarse grain being steeped at hog farms and to chopped straw for dairy cows and cattle being fattened up. The farms have already received several thousand tons of conifer "tips" ["paws"?], and over a thousand tons of meal have been processed from them. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 17 Feb 80 p 2] 10,657

FEED FROM UNDERNEATH ICE--Yakutsk, 27 Feb 80 (V. Komarov, correspondent of SEL'SKAYA ZHIZN')--The sovkhoz imeni Suburuskiy in Churapchinskiy Rayon has organized recovery of sapropel [organic mud] from Aryy-Kyuyele, Oybon-Kyuyele and Oyun-Uulabbyte lakes. In this difficult winter, this feed supplement helps preserve productivity of cattle. It is also used extensively by horse breeders as a supplement for herds of horses that graze at liberty. Although recovery of sapropel is not a simple matter in Yakutiya, since it has to be collected from under one meter of ice, the practice of this sovkhoz is being followed in the entire republic. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Feb 80 p 2] 10,657

CSO: 1824

REMODELING OF LIVESTOCK FARMS IN ZAPOROZH'YE

Moscow SEL'SKAYA ZHIZN' in Russian 17 Feb 80 p 2

[Article by A. Artyushin, deputy director of TsNIPTIMEZh, candidate of engineering sciences, and V. Rabshtyna, candidate of economic sciences, Zaporozh'ye: "Remodeling of Farms"]

[Text] A significant part of livestock production is still performed at many farms using obsolete equipment. The efficiency of their work can be improved by remodeling, expanding and replacing equipment.

Although remodeling requires less capital investment than new construction, it is still significant. It is very important to determine the maximum "allowance." The extent of expenses for remodeling depends to a decisive degree on the level of completion of the farms, availability of buildings needed for normal operation, installations, services and amenities.

It often costs more to erect additional facilities than actual remodeling. Thus, analysis of remodeling projects for a large number of dairy farms in the southern part of our country shows that the additional capital investiment constitutes a mean of 58.5% of the cost of the facility being remodeled, including 12.3% for the remodeling proper. The cost per animal space usually increases by 1.5-2 times at remodeled farms, as compared to the figure before remodeling.

The cost per animal space established for new complexes could probably serve as a guideline for permissible capital investment for remodeling. In other words, the overall cost of farms to be remodeled, including the residual production funds used and additional capital investment, should not exceed the cost of new facilities of analogous capacity.

The greatest effectiveness is achieved at large farms, where remodeling is directed toward introduction of progressive technology, updating equipment and improving working conditions. For example, at the dairy complex of the Peremoga sovkhoz in Zaporozhskaya Oblast, conversion of buildings from tethered to untethered maintenance of cows cost 204 rubles per animal space. But at the Dnepr sovkhoz in Dnepropetrovskaya

Oblast, where it was necessary to add a feed processing shop, dairy unit, calving department, silage and tuber storage facilities and grazing areas, the remodeling cost was 835 rubles per animal space.

Of course, when remodeling existing farms one must create complete main and ancillary facilities and complexes equipped with all that is needed. But the list of such facilities must be comprehensively substantiated.

Low economic effectiveness of remodeling is inevitable at farms that do not have reserves for development, the necessary territory, feed base, water, electric power, personnel, conditions for utilization of production waste, or that require too large a capital investment.

There is no justification for the practice of small farms (100-200 head) of remodeling to expand the capacity to 800-1200 cows, i.e., virtually new farms are constructed under the guise of remodeling. This happened, in particular, at the Druzhba kolkhoz in Krinichanskiy Rayon of Dnepropetrovskaya Oblast: the 200-cow dairy farm was remodeled to an 800-head capacity. There, the cost per animal space constituted about 2000 rubles, or over 14% more than in a new complex. In such cases, one should design and build new farms, and make use of existing facilities in them.

Efforts to expand production by means of different types of additions and special remodeling usually result in a negligible economic effect at the time the farm is put in operation and considerably greater cost of future remodeling. It is imperative to bear in mind that remodeling is a continuous process. One should redesign buildings from the standpoint of updating the main resources in the future. When remodeling and enlarging farms, one must not re-equip individual buildings without integrating them into a single complex. Remodeling should be based on plans and estimates prepared by design organizations, after in-depth technical and economic substantiation by means of variance evaluation of plans developed with consideration of scientific and technological advances.

Complex plans have been prepared in Zaporozhskaya, Dnepropetrovskaya, Rostovskaya and other oblasts in the southern part of country for development of livestock breeding on the basis of in-depth specialization and interfarm cooperation, introduction of progressive technology, new means of mechanization and scientific organization of labor. According to these plans, remodeling and enlargement of farms are being done at kolkhozes, sovkhozes and interfarm enterprises. The experience of these oblasts is indicative of the need to prepare plans in all areas for industrialization of livestock raising by means of farm remodeling.

When planning for new technology at remodeled facilities, one should be concerned in advance about selection and adjustment of animals to the new upkeep, feeding and milking methods, and define the sources of addition and formation of the herd. Strict consideration of all these factors in good time made it possible for the cattle breeders at the Elita sovkhoz, Melitopol'skiy Rayon of Zaporozhskaya Oblast, to raise the productivity of cows at the remodeled farm from 3315 kg milk per year before remodeling to 3533 kg after it.

It is desirable to supplement the dairy herd at a remodeled farm with heifers and primipara from specialized enterprises with analogous maintenance technology. At large remodeled farms (800-1200 cows), year round stall maintenance is desirable. The grazing and feed areas and cattle trails should have a hard surface cover. At medium-sized farms (600 cows), the combined upkeep method is more suitable: stalls in the winter, camp method in the summer, the animals grazing on green feed in corals or driven out to pasture and given a concentrate supplement in specially equipped areas. Special feed processing shops are needed at large farms to prepare the feed for distribution; at small and medium-sized farms, one can manage with feed distributor-mixers.

When converting farms to tethered maintenance, it is desirable to milk the cows using ADM-8A and M-620 machines, with collection of milk through milk pipes. One can also use milking areas with Tandem, UDT-6, Yelochka and UDYe-8 machines. In these cases, milking is combined with outings, and group tethers, type OSK-25A, are installed in the barns. The use of milking areas at farms with tethered cow maintenance increases the efficiency of the milking machines, creates better working conditions for milking machine operators, increases productivity of labor and improves the quality of milk.

With untethered maintenance, milking is performed only in the milking areas using type UDT-6 and UDYe-8 machines. When remodeling medium-sized farms, the milking machines are located in the additions to barns or passages between them. At large farms, construction of standard milking and dairy units is highly effective. A Tandem type installation is desirable at farms with a heterogeneous herd with respect to productivity and rate of milk yield. Yelochka is desirable for continuous [flow] group milking of cows that are homogeneous in these respects.

Industrialization of farms by means of remodeling is definitely not keeping up with current needs. This is attributable to several causes. Not infrequently, it happens that agricultural enterprises give orders for technicoeconomic substantiation, plans and estimates for remodeling, then fail to make use of them after they are prepared. For example, our institute issued documentation for remodeling of the dairy farm at the Pobeda sovkhoz, Borispol'skiy Rayon of Kiev Oblast, as far back as 1977. Implementation of the plan guaranteed an annual economic effect of 113,000 rubles. But to this day, milk is produced at that farm using obsolete technology which brings losses.

Remodeling is often delayed because of poor delivery ot intrafarm machines and equipment to kolkhozes and sovkhozes, and even more often due to inadequate limit on contractor work. The kolkhoz imeni Lenin in Solonyanskiy Rayon, Dnepropetrovskaya Oblast, was issued plans and estimates for remodeling of the dairy farm into a complex to raise heifers in early 1977. In 3 years, the contractor, Oblmezhkolkhozstroy, remodeled only 2 out of 14 buildings. If work continues at this pace, the remodeling will be completed in 14 years....

Also in 1977, plans and estimates were issued for remodeling the dairy farm at the Chayka sovkhoz in Chernigovskaya Oblast and in 1978 to the Progress kolkhoz in Solonyanskiy Rayon, Dnepropetrovskaya Oblast. Because of the lack of machinery and equipment, construction work has not been started to this day.

The main conclusion to be derived from this is that one should provide for special purpose allocation of funds for new construction and remodeling when making plans for capital investments on all levels. The system of material and technical supply should guarantee delivery of the necessary resources to implement these plans, while building organizations should guarantee the performance of planned work expeditiously.

At our institute, methodological recommendations were published in 1977 for preparation of remodeling plans for livestock farms. The technico-economic substantiations and planning-estimate documentation were prepared for remodeling standard dairy, fattening and heifer farms. On this basis, we shall expand methodological assistance to concerned kolkhozes, sovkhozes, interfarm enterprises and planning organizations.

10,657
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APPLYING COMPLEX LIQUID FERTILIZERS IN NONCHERNOZEM ZONE

Minsk SEL'SKAYA in Russian 10 Apr 80 p 2

[Article by Candidate of Technical Sciences V. Andrushchuk, senior scientific staff member, USSR Central Scientific-Research Institute for the Mechanization and Electrification of Agriculture in the Nonchernozem Zone, under rubric "Scientific Advise": "Complex Liquid Fertilizers: How To Use Them"]

[Text] Last year, a number of farms in our republic received their first 10-34-0 brand base solution of complex liquid fertilizer ZhKU. It contains 10 percent nitrogen and 34 percent phosphorus. Its main advantage over ammonia water is that it is a two-component fertilizer, has a higher concentration of nutrients, and does not contain any volatile ammonia. Machinery operators can work with it without individual protection devices, and the liquid can be applied to the surface of the soil. Compared to direct embedding of ammonia water in the topsoil, machines applying ZhKU are several times more efficient. This is very important in shortening field operation times.

At present, the farms do not have special machinery for applying ZhKU. Under last year's unfavorable conditions, however, the machinery operators of Minskaya, Gomel'skaya, and Grodnenskaya oblasts showed initiative and retooled their available machines to apply 50,000 tons of base solution. Soyuz, Pamyat' Lenina, Pobeda, Chyrvonaya Belarus', and imeni XXII S"yezd KPSS kolkhozes, Dmitrovichi Sovkhoz, and other farms in Berezinskiy Rayon applied ZhKU with sprayers, water dispensers, and liquid organic fertilizer spreaders outfitted with booms. The base liquid was kept in empty ammonia and fuel-lubricant containers that had been cleaned and rinsed. They were filled to not more than 70 percent of capacity.

It is worth while to pay attention to the experience of machinery operators of Berezinskiy Raysel'khoztekhnika in retooling RZhT-8 broadcast-spreaders, using pumping equipment from top-dresser-sprayers and 16-meter booms made from 32-millimeter pipe. To reduce oscillations and boom breakdowns, use was made of cable suspension and side clamps. Special deflector atomizers with 3-millimeter openings were installed every 1.4 meters along the boom. Thanks to its large capacity, the spreader can operate for 3 to 3.5 hours on one filling. This retooled RZhT-8 is 2.5 times more productive than the top-dresser-sprayer.

Before starting work, the machines' tanks must be cleaned and rinsed and the equipment must be checked for good condition and adjusted to apply the proper dosage. In applying the base liquid it is necessary to use straight-line or transloading technology, delivering the fertilizer in truck or tractor-drawn tanks. After surface spraying with a small overlap (not more than 20 centimeters) of adjacent swaths, the ZhKU is embedded in the soil by means of a harrow, cultivator, or plow (no embedding on meadows, pastures, and grain crops). The base solution can be applied in inter-row cultivation and top dressing of row crops.

Times and dosages of ZhKU are about the same as with other kinds of fertilizers. But autumn application of the base solution to light soils is much inferior to springtime application because of partial leaching from the topsoil. Phosphorus dosages are set at 60 to 90 kilograms of active ingredient per hectare. Dosages are adjusted depending on the planned yield, the crop being cultivated, and the soil's agrochemical properties. In dosage by weight, 100 kilograms of the base solution contain 10 kilograms of nitrogen and 34 of phosphorus. Approximate dosages of ZhKU for potatoes, sugar beets, root fodder crops, and corn are 250 to 300 kilograms per hectare; for other crops, 200. Deficient quantities of nitrogen and potassium are applied in the form of solid fertilizers at the usual times. Crop yield gains from solid and liquid complex fertilizers are practically identical.

Last year's experience indicates that a number of farms do not know how to work properly with the base solution and are ignoring its characteristics. It is wrong to pour it into tanks containing ammonia water residues, to store it in the open, or to operate the machinery without flushing the systems at the end of the shift; such practices lead to thickening and crystallization of the solution, which clogs the pipes and atomizers with insoluble deposits. Filter nets must be installed in the filling neck, the pressure lines, and the intake hose.

The base liquid is 1.4 times heavier than water. If the tanks are filled to the top, the walls will be deformed; if they are not full, they will tip over at the turns because of the absence of additional partitions and excessive speed of motion. ZhKU should not be applied when there is snow on the ground or on peat dust or compost.

The USSR Central Scientific-Research Institute for Mechanization and Electrification of Agriculture in the Nonchernozem Zone has developed a small-sized attachment for the RZhT-4 and RZhT-8 spreaders (weight 27 kilograms, length 2.7 meters) for applying ZhKU in swaths of 15 meters or more. The implement is connected to the discharge nozzle of the spreader. It can be made right on the farm. In the near future an experimental test of this tool will be carried out in all oblasts of the republic.

This year, the republic's farms are to apply 90,000 tons of ZhKU to the soil. It is essential to prepare the available equipment carefully in order to do the work properly and on time.

The use of the ZhKU, compared with mineral fertilizers, makes it possible to completely mechanize loading and unloading operations and reduce labor outlays by 30 to 35 percent.

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CSO: 1824

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DESIGNING FARM MACHINERY TO PROTECT ENVIRONMENT

Minsk ZVYAZDA in Belorussian 17 Apr 80 p 2

[Article by N. Makeyev, senior engineer, division of organization and adoption of scientific developments, Central Scientific-Research Institute of Mechanization of Agriculture in the Nonchernozem Zone, under rubric "The Scientist and the Five-Year Plan": "Without Damaging the Environment"]

[Text] Recently, laboratory collectives of the Central Scientific-Research Institute of Mechanization of Agriculture in the Nonchernozem Zone reported to the science councils. And at each meeting, the focus of attention was on environmental protection. It could not be otherwise, because any time we develop a new machine to cultivate the soil or propose a new technology we inevitably impinge on the environment. It is vital, therefore, that this incursion be rational so as not to disrupt the balance of nature.

Machinery designed to cultivate the soil must protect it against water, wind, and mechanical erosion. These three types of erosion frequently take place on the same land, thus worsening the overall damage. In this republic almost half the arable land is on hillsides. To protect it against destruction, our institute and other research institutions have proposed a new plowing technology. It involves the use of plows with sweep blades which retain the stubble. With this type of cultivation the moisture is absorbed intensively, so that plants develop better. Industry is already turning out blades for one make of plow, and blades for another make are included in the machinery system plan for 1981-1990.

For soil cultivation on hillsides, the institute's staff has also developed a special anti-erosion attachment. On fields that have been cultivated to loosen the soil, the attachment makes small intermittent ridges. These serve to retain the moisture. This innovation was developed on Sovkhoz imeni Ul'yanov in Minskiy Rayon, and it has proven its effectiveness. The implement has successfully passed state tests, and the joint scientific-technical council of the USSR Ministry of

Agriculture, the Ministry of Agricultural Machine Building, and the USSR Goskomsel'khoztekhnika have given it the go-ahead for series production.

For the maintenance of hillside meadows and pastures, flat needle disks have been developed for heavy furrows. They loosen the soil very well, which prevents water runoff and fertilizer erosion. A production inspection on the republic's farms has shown that the new implement boosts grass crop yields by 2.7 quintals per hectare on the first mowing and 13.7 on the second. Disks for anti-erosion soil cultivation are also recommended for general use.

One of the main requirements in erosion control during planting is to create a wind-resistant soil surface after the seeding machine has passed over it. This is achieved through the use of conical drill-coulters, which in addition prevent packing on mineralized soils. Another uncomplicated, easily removable tool for grain seeders also prevents pre-planting packing and leveling of the soil. Moreover, these mechanisms make it possible to avoid excessive pressure on the soil by the wheels of tractors and other machinery which tend to pack and destroy the soil structure. It has been estimated that in a year's time, one and the same place in a field will be "worked over" up to 40 times by tractor wheels.

In Belorussia, hundreds of thousands of hectares of arable land are yearly sugjected to periodic excessive moisture. The heavy mechanical composition of the soil retains both thaw and rain water, which does not penetrate deeply but remains on the surface. This often leads to soaking of the crops.. If the water stays on the surface of a winter-crop field for just one or two days, the harvest yield will drop substantially. Experience proves that the most effective means of protecting the crop is to ridge the soil. To mechanize this operation, our institute collaborated with the Special Design Bureau of the Odessa Plant imeni Oktyabr'skaya Revolyutsiya to develop a ridge-maker.

For purposes of strengthening the sides of drainage canals and levees our institute collaborated with the Dormash Special Design Bureau to develop a special hydro-seeder. Its tank is filled with a mixture of grass seed, a special filler, and water. After vigorous blending the mix is jetted onto the canal banks. The seed attaches to the soil and sprouts. To cope with water erosion better and, if necessary, build up moisture reserves, our institute has developed a three-row ripper and mole-plow ripper. The use of them boosts farm crop yields by 20 to 25 percent.

It is very important to the economy to protect plants against diseases. Staff members of the institute have designed machines which make it possible to treat crops quickly, efficiently, and without large applications of chemicals. In collaboration with the Belorussian Scientific-Research Institute of Plant Protection, a test of new technologies and machinery for treating potato seed was carried out at the Novyye Zyalenki Experimental Base in Chervenskiy Rayon. It turned out that the operation now requires only a tenth as much operative liquid, and crop yields after treatment are increased by more than 50 quintals per hectare.

The institute's farm machinery repair division has set up a machinery washing station. The cleaning facilities are provided with two waste water recovery lines. After being used to remove organic and mineral fertilizers and poison chemicals, the water is drained into a special section of the settling tank.

Intensive efforts are underway in the livestock farming sector as well. A special somplex for disinfecting manure has been built on Baraulyany Sovkhoz (Minskiy Rayon). The economic effect from its use on a farm which keeps 108,000 hogs adds up to more than one million rubles a year.

The institute's experience shows that it is possible to develop highly-productive machinery and equipment which not only avoids damaging the environment but also protects it. It is important to make the most efficient and widespread possible use of it.

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ACADEMICIAN OFFERS ADVICE ON TOP-DRESSING

Moscow SEL'SKAYA ZHIZN' in Russian 12 Apr 80 p 2

[Article by Academician V. N. Remeslo: "Special Features of Winter Crop Top-Dressing"]

[Text] Spring has been quite late almost everywhere. Therefore, winter wheat vegetation has regenerated later than usual in zones where it is raised.

Currently our approach must mandatorily be creative in selecting agricultural measures for caring for the winter grains. It is very important to take into consideration in each concrete case the condition of the sowings and the agro-ecological conditions for their development. For this we need first of all to inspect each field carefully so as to know for sure at the time of vegetation renewal the scope and nature of the damage or destruction of the plants and decide correctly what measures must be adopted to obtain the planned yield of grain.

Normally developed plants, especially on areas insufficiently dressed with fertilizers should be top-dressed during the period of vegetation renewal with nitrogen fertilizers at the rate of 30 kilograms of active substance per hectare. It is also desirable to apply the same amount of nitrogen again by disc seeders, that is, to apply the top-dressing at the roots.

Experiments at the Mironovskiy Scientific Research Institute of Wheat Selection and Seed-Growing established that in the last 3 years the increment in the yield of Il'ichevka wheat sown without basic fertilizer after peas for grain was 6.4 quintals per hectare from surface top-dressing with nitrogen early in the spring and 9.4 quintals from the same amount of nitrogen (30 kilograms a hectare) applied to the roots. When the same applications of nitrogen were applied twice (by the surface method early in the spring and later by disc seeders), the increase in the grain yield reached 13 quintals.

Well developed plantings should be top-dressed only at the roots. If it is not possible to apply fertilizers by seeders, the use of airplanes will be effective, but only after the end of spring tillering, at the beginning of shooting (when the first stem node can be felt).

Thinned and inadequately developed plants subject to repair need not be top-dressed in the early spring. Such plots should be opportunely undersown or resown with barley with a single application of a complete mineral fertilizer in the rows.

In connection with the fact that because of prolonged ice encrustation there will be "bald spots" in individual areas, the necessary number of seeders should be converted, using the method of the machine operators in Cherkasskaya and Kiyevskaya oblasts. With the aid of such units we can top-dress the plantings with fertilizers and, on plots where they have died, include the sowing of seed along the path of these units.

A few words about phosphorous-potassium fertilizers. The research of our institute has shown that their effectiveness is considerably lower in the spring than in the fall (before the sowing). On plots of winter crops raised after peas for grain the application by the surface method of 30 kilograms of active substance of phosphorous and an equal amount of potassium produces an increment in the yield of a total of 1.9 quintals per hectare, while these fertilizers applied by disc seeders produce an increment of 3.8 quintals. No perceptible increment is obtained from early spring applications of phosphorous-potassium fertilizers to winter wheat sown after corn for silage.

Inasmuch as it is possible to obtain good results from single nitrogen fertilizers (and also taking into consideration the late renewal of vegetation of winter crops), it is better to use available reserves of phosphorous and potassium fertilizers for sowing in the rows of spring grain crops.

As our research has shown, a moderate nitrogen feeding is necessary at the initial period of winter wheat development, and a larger feeding during the late phases of vegetation when it corresponds to the maximum increase in plant productivity. In 1978 the application of nitrogen fertilizers at the stage of shooting and ear formation assured a per hectare yield of 78.5 quintals of winter wheat of the Il'ichevka variety after peas sown for grain and 71.7 quintals after corn sown for silage. The increment totaled 14 and 21.3 quintals, respectively.

Typically even under last year's drought conditions nitrogen fertilizers applied at the late phases of winter wheat vegetation did not yield in effectiveness to those applied prior to sowing. According to data from the All-Union Selection and Genetics Institute, under the conditions of Odesskaya Oblast, the application of nitrogen at the stage of plant shooting and ear formation in the Priboy and Odesskaya-51 varieties (after bare fallow) was much more effective than when applied before sowing.

With such a fertilizer system nitrogen fertilizers (at the rate of 30 to 50 kilograms of active substance per hectare) should be applied by the root method at the end of spring tillering of the plants, and again (at the rate of 50 to 60 kilograms per hectare) by airplane at the beginning of ear formation.

The proper top-dressing of winter plantings is an important prerequisite for an increase in yields and gross grain harvests on the farms.

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CSO: 1824

TILLING AND CROPPING TECHNOLOGY

BUCKWHEAT CULTIVATION ENCOURAGED

Cultivation in RSFSR

Moscow SOVETSKAYA ROSSIYA in Russian 6 Apr 80 pp 1-2

/Article by M. Zaripov (Kazan'-Moscow): "It Is Bleak for Buckwheat"/

/Text/ In 32 years of work Natal'ya Nikolayevna Petelina has developed five varieties of buckwheat. In Tataria, where the breeder came 13 years ago, they take up 90 percent of the fields of the autonomous republic, which are sown with this crop, having supplanted the previous low-yielding varieties. It is a rare, exceptional case for buckwheat. From Aznakayevskiy Rayon Natal'ya Nikolayevna was sent the following message of appreciation: "All the kolkhozes and sovkhozes will sow Krasnostreletskaya on an area of not less than 1,000 hectares. Thank you very much for the good variety!"

The other varieties--Prikamskaya, Troyanda and Sokurovskaya--have been turned over for testing and propagation and are making their way into the mass fields. The restless agronomists are sowing new plots with them and are reporting excellent results.

Our conversation with Natal'ya Nikolayevna at a small laboratory of the Tatar Scientific Research Institute of Agriculture began with reflections about the buckwheat field of Russia. If I am to be more precise, with her question, had I had time to eat lunch? In turn I inquired, what were they serving in the dining room today: goulash with buckwheat, buckwheat pie, pudding, buckwheat pudding with curd?

"Oh, you don't say?!" Natal'ya Nikolayevna flung up her hands. "Where does it come from, the buckwheat? From time immemorial the buckwheat region, the Northwest, did not sow buckwheat, but after all the hospitable merchants of the master of Novogorod treated their partners--the Hanza negotiators--to 'northern rice.' The fine Mikula Selyaninovich plowed the field on a rusty sickle and buckwheat kasha. Aleksandr the Light Sergeyevich, when he came to the Pskov area to his father's village of Mikhaylovskoye, must have indulged in goose with crumbs. What is happening there now, is the sun shining differently? In the Ryazan' area, in Bashkiria, Tataria, in the Altay Mountains and the Far East they respect buckwheat, while in other places they treat it without the proper attention. In Kaluzhskaya Oblast it is not at all good, in Chuvashia--just think!--they reached 2,000 hectares of sowings, in Stavropol' they do grow buckwheat, while in the Kuban' it is away with it from the chernozem. It is a complete disgrace in Krasnoyarskiy Kray, I began working there, I know what room there is there for buckwheat. In Kuybyshevskaya Oblast it is possible to sow another 30,000 hectares, while the people of Volgograd could have increased it to 30,000 hectares."

"Isn't that too much to increase it by, by the thousands of hectares?"

"It is just right. It is necessary for buckwheat to make up 8-10 percent in the grain fields."

"How much is it now?"

"In places it is that much, but on the whole it will not be more than 1.5 percent. Success for other crops comes from buckwheat. My agronomists report that it is an excellent phytoculture, it cures acidic soils, after it the wireworm does not touch potatoes, no weeds remain on the field."

Not without reason is buckwheat called "northern rice." During the first postwar five-year plan it covered 2 million hectares. But then its sowings began to decrease, and last year were already 1,123,000 hectares. It was planned to purchase 535,000 tons of buckwheat grain, but they procured 138,000 tons. Less than on the average during the years of the Ninth Five-Year Plan. It is not surprising that buckwheat in all its forms on the menu of our public dining is now a great rarity. What is the matter?

In Moscow there is the Lermontovskaya subway station. At the stop a stream of passengers leaves the cars. One half rushes toward the escalator on the right, to get from there to Khariton'yevskiy Lane, the other hurries to the left, in the direction of the other lane--Orlikov. The All-Union Academy of Agricultural Sciences imeni V. I. Lenin is on Kharitov'yevskiy Lane, the working headquarters of the sector--the RSFSR Ministry of Agriculture--is on Orlikov Lane. I got the impression that many of the current misfortunes of buckwheat are due to the fact that the scientists of the academy and the specialists of the headquarters of the sector are as they are on the subway train: they ride to work together, but at the stop they go in different directions and work separately.

I get in touch by telephone with Academician Secretary of the Plant Growing Department of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin Grigoriy Trofimovich Lavrenenko and say that I would like to know how things now stand with buckwheat. The academician secretary responded that he "was not completely up on things" and asked me to avail myself of the opportunity and meet with the director of the All-Union Scientific Research Institute of Leguminous and Groat Crops, Doctor of Biological Sciences

Nikolay Mikhaylovich Chekalin, who had just come to Moscow, to Khariton'yevskiy Lane.

"True, in connection with buckwheat there is nothing to boast of for the present," N. Chekalin said, "but there is no reason for practical workers to take offense at science. There are enough of all kinds of recommendations and developments, it is worth following them--and it is possible to ensure the planned yield without particular problems."

But here is how the same questions were answered for me in the ministry, at the Main Administration of Grain and Oil Crops, which Stepan Filippovich Borshch heads:

"We have enough of our own difficulties, but science is of little help. It is providing too little good seed, it is breeding new varieties poorly."

There are counterclaims and reproaches instead of a good alliance and cooperation. But the "prestige" of buckwheat does not increase because of this. It is more difficult to deal with it than with other crops, hence the desire of practical agronomists to reduce the area under it. Moreover, the choice of varities for sowing is small. On the fields of the RSFSR 26 of them have been regionalized. Is this a lot or a little? Let us look at the catalog of regionalized varieties of various cereals. Wheat--140 varieties have been regionalized, barley--77, corn with hybrids--96.... Buckwheat of the Bogatyr' variety has been sown since 1938, Kalininskaya--since 1954. During this five-year plan it was planned to breed and regionalize seven new varieties of buckwheat. Four were regionalized. This measure is not so much of a practical nature as it is of a symbolic one: the new varieties in the total plantings cover only about 40,000 hectares.

However, what can be said about the new varieties? In developing them the breeders have to overcome the mysteries and opposition of nature. But the scientific research subdivisions of the All-Union Academy of Agricultural Sciences imeni V. I. Lenin, which were entrusted with providing seeds of superior stock and the highest reproduction, are not coping with this task.

In 1977 the test plots and experimental fields should have turned over to farms for strain renovation nearly 28,200 tons of seed of select reproductions, but provided only 10,300 tons. In subsequent years matters turned out even worse.

What is this leading to? Open the most popular textbooks, handbooks, manuals and recommendations, of which specialists of the RSFSR Ministry of Agriculture and scientists are the authors. In them it is stated that the Mayskaya, Krasnostreletskaya and Shatilovskaya-5 varieties surpass the Bogatyr' variety in yield by 1.5-3 quintals. But what are they sowing the fields with? Last year Krasnostreletskaya covered 71,500 hectares, while the less productive Bogatyr' covered 500,000 hectares. Where is the logic of management? It is commendable to promote new varieties, to explain what is good and what is bad, but they must be advanced to the fields quickly and vigorously!

Here is a typical example. Of all the places in the RSFSR you will probably not find another place so favorable for buckwheat as the fields of Orlovskaya Oblast. The weather is uniform, without the sharp changes which bees and the flowering of grasses cannot bear. The All-Union Scientific Research Institute of Leguminous and Groat Crops, at which there are many specialists, is located in the oblast. The institute and the oblast Administration of Agriculture have compiled more than one plan on increasing the production of buckwheat. But without result. Starting with seed growing and ending with the processing of the harvest, the oblast can serve as an example of the lack of agronomic culture, of economic and scientific helplessness.

The Skorospelaya variety was bred here in 1975, but last year they sowed it on barely more than 700 hectares, the same amount as in the year of propagation. They have been regionalizing Shatilovskaya-5 for more than 10 years, but the variety covers only 8,330 hectares. In turn 57,000 hectares have been assigned to low-yielding crops! During the Eighth Five-Year Plan the average yield of buckwheat on the rich land of Orlovskaya Oblast was 6.3 quintals, during the Ninth Five-Year Plan--5.6 quintals. During this five-year plan they are harvesting 2-3 quintals. However, what is surprising here! They do not observe agricultural technology, they plant what they can get their hands on--grain of unknown reproductions, which long ago lost its varietal merits. In 1977 the experimental stations and seed growing farms of the oblast should have provided the kolkhozes and sovkhozes with 4,600 quintals of seed grain of superior stock and the highest reproduction, but produced only 70 quintals. In recent years they have managed barely half of this goal.

Unfortunately, the picture is typical. There are entire oblasts and autonomous republics, where they do not see stock seeds for years. During this five-year plan they have not received a single elite seed at the kolkhozes and sovkhozes of Kaluzhskaya, Kirovskaya, Orenburgskaya and Permskaya oblasts and in the Mariyskaya and Mordovskaya ASSR's. The low agritechnical standards, the poor level of management, the slowness of scientists and the neglect of seed growing have given buckwheat more trouble than it has experienced from the severest droughts, early frosts and incessant downpours.

Previously they worked on buckwheat on orders, every farm assigned to it a patch of plowed land: if it ripens, splendid, if not, the loss is not that severe. Now specialization and concentration have affected many crops, not each and everyone, but the best prepared and capable should take up buckwheat. In Tataria the Aznakayevskiy Rayon farmers have begun to allocate for it one-tenth of the grain fields, during the last five-year plan they increased the yield of buckwheat to 8.9 quintals. The 2.5-fold increase of its sowings along with the increase of the standards of farming made it possible to increase the sale of grain threefold. During the 10th Five-Year Plan the area planted with it in the rayon came to 9,000 hectares, this is now 12 percent of the grain fields. The Aznakayevskiy Rayon experts provide 27 percent of the harvest and one-third of the commercial buckwheat of the autonomous republic. It is unfortunate that in other rayons they deal with it just anyhow. During this five-year plan Tataria, in spite of the fact that it has the example and experience of the Aznakayevskiy Rayon farmers, has not once been able to obtain decent harvests, and the four-year quota on the sale of buckwheat to the state has been half fulfilled.

The concentration of plantings and the specialization of its production are also raising serious problems. One of them is the supply of the experts of the buckwheat fields with special herbicides for controlling weeds, the allocation of an adequate amount of equipment, particularly tilling tractors, so that it would be possible to carry out the planting by the effective wide-row method, which as compared with the conventional method yields per hectare two to three additional quintals. However, they are not allocated equipment specially for buckwheat, they are hoping that at the farms they will be able to do without it. Even the experts of Aznakayevskiy Rayon, for instance of the Kommunizm Kolkhoz, where 500 hectares are alloted for buckwheat, sow some of the fields using conventional seeders and consciously agree to losses of the crop.

Apparently, with time the breeders will develop strong, vigorous varieties of buckwheat, which will compete with any of the highest yielding cereals, but today its potential is still lower than wheat, rye and barley. A threefold increase of the purchase prices of buckwheat equalized the economic merits of the crops: it is no wonder when the profitability of its planting amounts to enviable indicators--300-500 percent. However, on the whole a shortage of grain, which is necessary for the development of livestock breeding, is forming. During this five-year plan the Aznakayevskiy Rayon farmers obtained 17 quintals of legumes per hectare, while barely more than 11 quintals of buckwheat. If we multiply the difference by the number of hectares, we would get 30,000 tons. It is not enough that this influences the indicators according to which the winners are determined, the farms cultivating buckwheat are experiencing difficulties due to the shortage of concentrates. This is having the result that the gained economic impact from buckwheat is lost in another sector--livestock breeding. Beet growers receive compensation in the form of molasses and pulp, for their products they are given sugar in kind. Should not buckwheat be equated with the especially important crops, should not the coefficient of its yield be taken into account? For at the farms, where they prefer other cereals to buckwheat, other conditions being equal they have not more money, but natural grain.

Much is being written about buckwheat. The year before last to one of the publications in SOVETSKAYA ROSSIYA the RSFSR Ministry of Agriculture responded that the necessary steps were being taken, the situation would be corrected--there would be more plantings, the harvests would rise, the purchases would increase. What happened in reality? In 1979 the sowings of buckwheat decreased, the harvests remained at the previous level, while its purchases decreased by 100,000 tons.

Yet the experts of the buckwheat fields are receiving letters in which they are asked to help to cultivate this crop and to suggest how it is necessary to sow and harvest it. Here is one of them, which came addressed to State Prize winner F. Shakirov, a link leader of the Kommunizm Kolkhoz of Aznakayevskiy Rayon in the Tatarskaya ASSR, who every year obtains 20 quintals of buckwheat per hectare.

"As an agronomist I have long wanted to engage in the cultivation of this crop," writes Yekaterina Ivanovna Il'ina, "I earnestly ask you to sell me some buckwheat seed, 20 kg. Send it in two parcels addressed to me, I will send you the money before or after receiving the parcels, let me know how much it costs. We do not have seeds of this crop in our oblast."

The address: Remdovskiy Sovkhoz, Gdovskiy Rayon, Pskovskaya Oblast. An ancient Russian region, at the center of which, as is mentioned in the chronicles, back in the 16th century they had a special row of shops for the sale of buckwheat, which "is very good and useful for various needs."

Perhaps there are enough formal replies, why waste time on extra paper? Even if this is an exceptional case, we agree to wait until autumn with a report on the steps taken from the ministry and from scientists, if only, at last, to make the readers happy with the steps actually taken--a good statistical report from the buckwheat fields.

Belorussian Resolution

Minsk SEL'SKAYA GAZETA in Russian 12 Apr 80 p 1

/Article: "On Additional Measures to Increase the Production of Buckwheat at Kolkhozes and Sovkhozes and to Stimulate the Fulfillment of the Plans on Its Procurement"/

/Text/ The Central Committee of the Belorussian Communist Party and the Belorussian SSR Council of Ministers note that the Belorussian SSR Ministry of Agriculture and its local organs, the oblast committees, city committees and rayon committees of the Belorussian Communist Party, the oblast soviet executive committees and rayon soviet executive committees, the kolkhozes and sovkhozes, which cultivate buckwheat, have not ensured in full the fulfillment of the instructions of the CPSU Central Committee and the decrees of the Central Committee of the Belorussian Communist Party and the republic government on increasing the production and procurement of buckwheat.

At many farms, when cultivating this crop, as before serious violations of the rules of agricultural technology are being allowed, its sowings are split up. Steps of moral and material stimulation are being undertaken inadequately. There is no effective monitoring on the part of party committees of the organization of production and the fulfillment of the plans on the procurement of buckwheat grain.

In order to enhance the economic interest of kolkhozes and sovkhozes in the enlargement of the plantings and the increase of the production and sale to the state of buckwheat and to create at buckwheat growing farms the necessary conditions for the development of livestock sectors the Central Committee of the Belorussian Communist Party and the Belorussian SSR Council of Ministers have established the counter sale to them of mixed fodders in the amount of 6 tons per ton of buckwheat sold to the state on the condition of the fulfillment by the farm of the plan of its procurement and its own supply with high quality seed.

The Belorussian SSR Ministry of Agriculture, the oblast committees, city committees and rayon committees of the Belorussian Communist Party, the oblast soviet executive committees and rayon soviet executive committees, the kolkhozes and sovkhozes are ordered to analyze carefully the state of affairs with the cultivation of buckwheat and to take the necessary steps on the radical improvement of agricultural technology, the sharp increase of the production of the grain of this crop in order to successfully fulfill the plans of procurement in 1980 and subsequent years. It is necessary to direct particular attention to the further concentration of the plantings of buckwheat at farms this year, to introduce highly productive varieties and to use the optimum, advanced technologies of cultivation. In 1980 the size of the sown areas should be increased to a minimum of 80-100 hectares at each buckwheat growing farm.

It is necessary for the Belorussian SSR Ministry of Agriculture and its local organs, the oblast soviet executive committees and rayon soviet executive committees to hold in the republic, oblasts and rayons seminars on questions of the cultivation of buckwheat and the study of the know-how of the leading farms, which obtain large harvests.

For the purposes of increasing the labor activeness and developing the creative initiative of kolkhoz farmers, workers of state farms, the managers and specialists of farms and agricultural organs it is recommended to organize the republic socialist competition of oblasts, rayons, kolkhozes, sovkhozes and other state agricultural enterprises for the increase of the production and procurement of buckwheat.

Scientific Production Conference

Minsk SEL'SKAYA GAZETA in Russian 12 Apr 80 p 1

/Article (BELTA): "Return the Past Glory to Buckwheat"/

/Text/ Biological scientists consider buckwheat an irreplaceable dietetic food product. Its groats are rich in protein, contain fats and carbohydrates, mineral salts and organic acids, trace elements and vitamins, increase physical endurance, promote the rapid regeneration of blood and possess a number of other valuable properties. Among the people it has long been taken as the rule to keep near the flowering buckwheat field a beehive--the best honey is gathered here. They did not forget to sow buckwheat during the most difficult years. For example, its gross harvest in the republic during the postwar five-year plans considerably excceded the present harvest.

What has happened in recent times with the well-deserved reputation of this crop? Why are buckwheat groats served at the table of the Soviet individual in pitiful amounts? The answers to these questions are given in many party and soviet documents. Specific measures on correcting the situation which has formed have also been elaborated. However, as was noted by the participants in the republic scientific production conference, which was held in Minsk and was devoted to problems of increasing the production of buckwheat under the conditions of Belorussia, these measures have not been implemented.

"Exceptionally strenuous obligations have been assumed for the current year by our rural workers," Candidate Member of the CPSU Central Committee Politburo and First Secretary of the Central Committee of the Belorussian Communist Party P. M. Masherov said at the republic conference of the party, soviet, trade union and Komsomol aktiv. "And, of course, it is impossible by means of the established traditional practice of work to reach, for example, a yield of grain cereals of 32 quintals per hectare and to ensure a gross harvest of grain of 9-9.5 million tons." The same thing fully applies to buckwheat. Not only to change radically the attitude toward it, but also to use the latest achievements of scientific and technology in its cultivation--this is what was discussed by the directors of scientific research institutes, who spoke at the conference: Director of the Scientific Research Institute of Farming V. P. Samsonov, Director of the Scientific Research Institute of Soil Science and Agrochemistry I. M. Bogdevich, Director of the Scientific Research Institute of Plant Protection V. F. Samersov, Chief of the Belorussian SSR Sortsemprom V. P. Kulakov, Academician Breeder Ye. D. Gorina, Senior Research Association of the Scientific Research Institute of the Mechanization and Electrification of Agriculture of the Nonchernozem Zone of the USSR S. G. Grin'kov. Chief of the Administration of Agriculture of the Shuchinskiy Rayon Soviet Executive Committee V. I. Dem'yankov, chief agronomist of the Administration of Agriculture of the Ivachevichskiy Rayon Soviet Executive Committee I. I. Mikhnyuk, Director of the Zazer'ye Experimental Base of Pukhovichskiy Rayon I. N. Zhovnerchik, Chairman of the Progress Kolkhoz of Barabovichskiy Rayon G. S. Shidlovskiy and chief agronomist of the Gomel'skiy Sovkhoz of Gomel'skiy Rayon V. M. Savchenko shared their experience in organizing labor in the cultivation of buckwheat.

The speech of I. S. Golubets, the leader of a mechanized link for the cultivation of buckwheat from the Iskra Kolkhoz of Chervenskiy Rayon, aroused particular interest among those present. By performing operation by operation all the work on an area of 200 hectares, the four machine operators raised a crop of 21 quintals of grain per hectare. The planting was carried out by the advanced wide-row method, before seeding the seeds were rinsed, the most production of them were selected and then disinfected. The link leader sowed 105 hectares excellently, cultivated the plantings on this area and harvested the buckwheat. As a result on some plots its yield was 25 quintals. Now the machine operators have undertaken to obtain the same yield from the entire buckwheat field of 220 hectares.

With allowance made for the experience of the leading farms and the research activity of scientists the Belorussian SSR Ministry of Agriculture jointly with the Belorussian Scientific Research Institute of Farming has elaborated specific recommendations for all buckwheat growing kolkhozes and sovkhozes. The executives and chief agronomists of the oblast and rayon administrations of agriculture, the representatives of the farms and other participants in the conference received them for practical adoption.

Secretary of the Central Committee of the Belorussian Communist Party N. I. Dementey and Belorussian SSR Minister of Agriculture F. P. Sen'ko spoke at the conference. Deputy Chairman of the Belorussian SSR Council of Ministers G. G. Kovalenko took part in its work.

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USSR REPORT

AGRICULTURE

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MAJOR CROP PROGRESS AND WEATHER REPORTING

WEATHER AFFECTS CROP PROGRESS IN COUNTRY

[Editorial Report] Newspaper reports in the USSR continue to report delays in field work due to late snows and the cold, wet spring. As far back as late March a short newspaper article quotes a kolkhoz brigade leader from Kabodiyenskiy Rayon, Tadzhikistan:

"We thought that February was the culprit holding up spring but March has in no way warmed up the soil." The article in Moscow PRAVDA in Russian 26 Mar 80 p 1 continues, "The weather has in truth not favored the crop farmers. The Vashkh Valley is a subtropical zone--usually it is green at this time and the large scale sowing of cotton is beginning. But now only the almonds are blooming shyly and we have to wait while it warms up."

The eastern Black Sea area was not spared wintery weather even a month later. The resort city of Sochi endured an unusually cold spell accompanied by precipitation which left a wet snow cover on the city briefly, according to Moscow TRUD in Russian 19 Apr 80 p 4.

Two items appearing in late April in Moscow GUDOK in Russian 27 Apr 80 p 4 indicate that Armenia's position south of the Caucasus Mountains was not enough to shield it from some adverse weather. A brief relates the story of a flock of 150 cranes being forced down around Lake Dzhogaz by icy winds as the weather took a sudden turn for the worse.

Another item appearing in Yerevan KOMMUNIST in Russian 27 Apr 80 p 2 reports on a meeting of the Armenian Council of Ministers. In the article the Armenian ministries of agriculture, procurement, land reclamation and water management, and the food industry, the State Committee for agricultural equipment, the board of the Armenian Cooperative [Aykoop], and other ministries, departments and organizations, sovkhoz directors and kolkhoz boards are called upon to take all measures to liquidate the consequences of the adverse weather in the shortest possible time, to take necessary agrotechnical measures for the restoration of perennial plantings and crop stands.

The beginning of May did not mean the end of the snow. A report in Moscow PRAVDA in Russian 4 May 80 p 6 from around the settlement of Buron in the Alagir Gorge, in the southern part of North Ossetia:

"Spring plastered the central Caucasus with mighty salvos of snow."

The weather situation in the Soviet south-east was more favorable in early May: "Spring in the Chuya Valley [Kirgizstan] turned out propitiously for the crop farmers: reasonably warm, reasonably rainy..," according to Moscow PRAVDA in Russian 3 May 80 p 1.

Field work progress in the Baltic area was held up by adverse weather. In Lithuania "rains and the return of cold weather complicated the course of spring field work," according to Vilnius SOVETSKAYA LITVA in Russian 8 May 80 p 1.

In Latvia an early May report in Riga SOVETSKAYA LATVIYA in Russian 7 May 80 p 1 refers to work proceeding at a fast pace despite cold and adverse weather. However, "the portion of those rayons where the snow fell have been put into a complicated situation."

"Precipitation hindered the course of the sowing campaign for the past week," according to Tallinn SOVETSKAYA ESTONIYA in Russian 7 May 80 p 1.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

CONCERN ABOUT GRAIN AND FEED IN BELORUSSIAN SSR

Moscow SEL'SKAYA ZHIZN' in Russian 6 May 80 p 1

[Article by V. Legan'kov (correspondent of SEL'SKAYA ZHIZN'), Belorussian SSR: "Concern About Grain and Feed"]

[Text] The kolkhozes and sovkhozes of Belorussia plan to harvest 32 centners of cereal grain per hectare and to drastically increase the production of coarse and succulent feed.

The weather has been such that planting of potatoes is being deployed in the southern and southwestern part of this republic, while in the north and northeastern parts the winter crops are just beginning to sprout. The local kolkhozes and sovkhozes cannot really undertake the sowing of early spring crops. The unstable and difficult spring has compelled the farmers to tighten their work schedules and perform work of the highest quality.

The first concern is about the fields of grain, which occupy over half the plowed land. This is valid. For the grain growers have taken on heavy obligations, having decided to bring the gross grain harvest up to 9 million tons, with a yield of 32 centners per hectare. It is primarily the experience gained that makes such a goal realistic. While the annual average under the 8th Five-Year Plan was 13.1 centners of grain and leguminous crops per hectare, the figure for the current five-year plan is 22.6 centners. True, the extremely inclement weather of the past season had an adverse effect on level of grain production, but even then the leading kolkhozes and sovkhozes produced a harvest of 35-40 centners.

At the present time, the slogan "Fulfilment of obligations to be guaranteed starting in the spring," has become a mandatory requirement. Utmost reduction of time spent on field work has gained special importance. In all areas, the Ipatov method of labor organization has been adopted. the production control [or dispatcher] service is being used extensively, and machinery is serviced at night. The efficiency experts [rationalizers] have worked like never before to see that efficient use is made of high-power T-150K and K-700 tractors. Previously, because of a shortage of special cultivators and sowing machines, they operated at half capacity, but now a large number of sower and doubled up cultivators adapted for application of liquid fertilizer have been produced for these tractors.

Wide-sweep equipment is also being attached more and more often to caterpillar tractors. Hundreds of mechanized sower loaders have appeared, particularly those based on the SK-4 combines that have been written off. At the Zarya kolkhoz, Glubokskiy Rayon, Vitebskaya Oblast, containers for simultaneous application of ammonia water have been suspended on the 8-m wide cultivator; in Berestovitskiy Rayon of Grodnenskaya Oblast, there are 82 sowing machine loaders and potato planters, 21 wide-sweep cultivators and about 30 sower hitches in operation. The Brestskaya Oblast administration for agriculture approved, already in the course of sowing, the knowhow of Ivanovskiy Rayon in the manufacture and use of simple but efficient wide-span machinery, and has disseminated this practice. In Minskaya Oblast, about 450 sower hitches and 500 combined units for presowing cultivation have been driven out on the fields.

It is expressly thanks to such preparation combined with good organization of labor that one can tighten the sowing work schedule. For example, at the Lyubanskaya experimental base in Minskaya Oblast, spring grain crops were planted in 3 days; at the kolkhoz imeni Pritytskiy, in Berestovitskiy Rayon of Grodnenskaya Oblast, an entire week of sowing work was saved, while at the Druzhba kolkhoz in Dobrushskiy Rayon, Gomel'skaya Oblast, all 1000 hectares of early crops were planted in 4 days. There are very numerous instances of crews sowing 50-80 hectares per day.

In guaranteeing a large harvest, the crop growers have carefully planned the tactics for their work. In this republic, there are plans to expand sowing areas and upgrade the structure of the grain fields. At present, 3,150,000 hectares have been allocated for grain and leguminous crops, which is 100,000 ha more than actually harvested last year. Winter rye, being the most valuable food crop, takes up 1.1 million ha. There are about 300 aircraft and helicopters, 17,000 pieces of ground equipment, including 6000 grain sowers involved in delivering food to the winter crops. There will be two feedings for soil of a light mechanical composition, at the start of vegetation and the end of the "shooting" stage. There is a significant increase in use of growth inhibitors in order to prevent lodging. Kampozan, a new and highly effective retardant, will be used for the first time on a large scale on rye fields.

Special attention is being given to placement of spring grain crops in different zones of the republic and in rotating crop fields, with due consideration of soil and climate conditions. Barley fields are concentrated mainly in areas with the most fertile soil. For example, barley will constitute 28% of grain crop structure in Gomel'skaya Oblast, 39% in Minskaya and 45.4% in Vitebskaya oblast. And, while every fourth hectare of barley was previously planted on stubble fields and other precursors that were not any better, at the present time all of the crops will be on fields previously used for row crops, leguminous crops and perennial grasses.

The fertilization system plays an important role in the agrotechnological complex for spring fields. In order to assure maximum effectiveness of fertilizers, the estimates for use thereof in all forms of the republic were made on computers. On the average, there are 230 kg active fertilizer ingredient per planted ha, including 52 kg of scarce phosphorus. The most progressive method of application of granulated superphosphate in rows is used everywhere. A total of 22 million tons of organic fertilizers are used on spring grain crop fields at the rate of 20 tons per ha. All fields used for such crops that presented high acidity were limed. Ammonia water is used extensively during the main preparation of soil, and this makes it possible to allocate more sold nitrogen fertilizers for supplemental feeding of perennial grasses, meadows and pastures.

There is also another important distinction to this spring: feed crops are on an equal footing with cereal crops. This republic's kolkhozes and sovkhozes plan to increase the fodder reserves to 21 million tons of feed units and 2.2 million tons of digestible protein. Additional steps have been developed and are taken everywhere to increase production and improve the quality of coarse and succulent feed. In particular, following the example of Grodnenskaya Oblast, the amount of corn planted for silage has doubled, and there has been a drastic increase in work pertaining to spring care of meadows and pastures, as well as perennial grasses. More attention is being given to root crops, annual grasses, and there are plans to enlarge the fields occupied by repeated and late-summer crops.

The irrigation equipment and feed gathering machinery are being repaired in advance, and all this is an organic part of the spring work. Organizational forms that are new to the republic are being used extensively to increase its effectiveness and improve its quality: there are interfarm feed producing enterprises in Gomel'skaya and other oblasts; in Vitebskaya Oblast there are unassigned ["beznaryadnyye"] units that operate on the principle of brigade contracts, and in Mogilevskaya Oblast there are interfarm enterprises for mechanization of agriculture. In a word, the entire arsenal of the farmer is already working on the harvest starting in the spring.
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MAJOR CROP PROGRESS AND WEATHER REPORTING

FIELD WORK PROGRESS REPORT FROM OMSKAYA OBLAST

Moscow SEL'SKAYA ZHIZN' in Russian 6 May 80 p 1

[Article by M. Sil'vanovich (correspondent of SEL'SKAYA ZHIZN'). Omskaya Oblast: "Time is Short"]

[Text] At the present time, the farmers of Omskaya Oblast are trying to secure the achievements made last year when they raised a record amount of grain. Spring has warned them that the road will not be easy, it will be a late sowing time. For this reason, sowing should be done properly, on well-cultivated soil, and the full amount of fertilizers must be used....

The machine operators of kolkhozes and sovkhozes have started to feed the grasses and winter crops. Such work is being done best of all in Kormilovskiy, Mar'yanovskiy, Novovarshavskiy and Nazyvayevskiy rayons.

We talked with A. A. Moroz, chief agronomist of the oblast agricultural administration, about the organizational and technological distinctions of the sowing work.

"The main distinction," Aleksey Antonovich says, "is that last year's inclement autumn left quite a lot of work to be done. We have to gather twice as much straw from 1 million hectares than in ordinary years prior to spring plowing. True, the term "spring plowing" is used with qualification at the farms of Omskaya Oblast, and in each region that differs in soil and climate it refers to something specially inherent to it. Thus, in the steppe and southern forest-steppe, preference is given to minimal superficial tilling, in the northern forest-steppe to plowing but virtually without furrowing, and terrace plowing in the subtayga and tayga region. The main point is not to delay, not even for an hour, in covering up the wet soil!"

Of course, in such a situation, labor and technological discipline must be strong, and the role of competent organization of labor increases. As before, the orientation is on complexes developed by the Ipatov method. There is intensified inspection of fulfilment of assignments for each shift. On the average, in this oblast the productivity of the equipment must be 40% higher than usual, as this is the only way that one can maintain the pace dictated by the prevailing spring conditions. It is planned to tune up the sowing machines in advance, and complexes will be driven out to the starting positions.

Three to five days are scheduled for each cultivar. The general estimate is to complete sowing grain crops in 10, 12 days at most, and to inspect the seedlings within the first 5 days of June.

Grain crops will cover almost 2.4 million hectares, 80% of which have good precursors. Thus, 600,000 ha will be on fallow land and 1 million ha on crop rotation fields with short rotation, where every fourth field is pure fallow land. Emphases has been laid on more efficient use of fertilizers. In all, 970,000 ha of grain crop fields will be treated with fertilizer.

The current data being received these days from rayons and farms indicate that the front of field and preparatory work is widening on the eve of sowing time. Certified seeds have bene procured for the entire sowing area in the main grain crop regions. Wet soil has already been covered over 300,000 ha.

Spring is asserting itself, but still the matter of equipment overhaul has not been entirely taken care of. More than 2500 tractors, including 400 high-power K-700 units, are not ready to work! There is a danger that many of them will never be able to participate in the spring harvesting. The overhaul resources of Goskomsel'khoztekhnika [State committee for agricultural equipment] do not have any turbocompressors, temperature and oil pressure gauges, and there is a shortage of batteries.
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REPORT FROM VOLGOGRADSKAYA OBLAST

Moscow SEL'SKAYA ZHIZN' in Russian 7 May 80 p 1

[Article by V. Losev (foreign correspondent of SEL'SKAYA ZHIZN'), Volgogradskaya Oblast: "For a Heavier Spike"]

[Excerpts] The existing situation made it necessary to immediately search for additional reserves to expedite spring harvesting in all farms of Volgogradskaya Oblast. For the farmers have decided to obtain at least 20 centners of grain per hectare in the final year of the current five-year plan. Achievement of the planned productivity of grain fields, which cover almost 4 million hectares, would permit coverage of the developed debt and fulfillment of the assignment stipulated under the five-year plan.

Experience has shown that strict adherence to all recommendations for cultivating agricultural crops yields a good return. At the progressive kolkhozes and sovkhozes, the mean annual harvest for the past period of the five-year plan constituted 19.3 centers per hectare, or 5.3 centners more than the average for this oblast. For expressly this reason, a close scrutiny is being given to the quality of work as one of the effective reserves for increasing the gross grain harvest. There are 213 departments, 308 brigades and 365 units involved in the competition for the title of group of highly sophisticated agriculture.

There is constant concern about the winter fields. And although last autumn was very stingy with precipitations, the farmers were still able to plant at the optimum time the most productive wheat and rye cultivars on almost 1,052,000 hectares, which is 220,000 hectares more than the mean annual area of crops in the preceding period of the five-year plan.

Aircraft of the agricultural aviation start to fly over the winter crops at sun-up. Concurrently ground-based equipment is used to apply fertilizer. By means of this combined method, all of the fields in Podtelkovskiy, Novoanninskiy and Mikhaylovskiy rayons were fed within the very shortest time. Another reserve for increasing the fertility of the fields was also put into action. The agronomical service of kolkhozes and sovkhozes sends a significant amount of phosphorus-containing fertilizers to feed the spring fields. They are applied in the rows together with the seeds.

The team of each farm has begun spring work on a profoundly substantiated program, which includes an extensive range of measures to increase the yield from the grain crop fields. A total of 1,200,000 mechanized complexes worked on fulfilling this program. The operation of each of them is determined on a linear schedule, which clearly reflects the continuity of the technological process, specifies the time for specific operations. Wherever one goes today, one hears the statement that progressive organization of labor results in more productive operation of equipment.

At the present time, the machine operators work around the clock in the fields. None leaves the strips before completing his assignment. This is graphically indicated by the red flags that are raised in the farms and villages in honor of the leaders in the competition. Early spring crops were planted on a very tight schedule at farms in Kotel'nikovskiy, Chernyshovskiy, Kalachevskiy, Gorodishchenskiy and several other rayons.

When the sowing machines leave the fields, units go out that have to roll down the planted areas. Mass scale use of this agrotechnological procedure will aid in increasing the harvest. The farmers of Volgogradskaya Oblast are striving to make use of all possible resources to obtain the largest harvest and to fulfill the obligations they have assumed.
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RICE CROP PROGRESS IN KHERSONSKAYA AND KRYMSKAYA OBLASTS

Moscow SEL'SKAYA ZHIZN' in Russian 9 May 80 p 1

[Article by A. Soldatskiy (correspondent of SEL'SKAYA ZHIZN'), Krymskaya and Khersonskaya oblasts: "Using All Means"]

[Text] One has to perform 7-10 preliminary operations to prepare the soil before planting rice. They are usually done in advance, on the basis of available means.

"But today, when a large volume of work has converged in the fields at the same time, the requirements are different," states V. A. Sikorskiy, director of the "50th Anniversary of the October Revolution" sovkhoz in Krymskaya Oblast. "Machine operators from industrial enterprises and construction organizations have come to help the sovkhoz. They arrived with their own equipment and they are providing much assistance."

At present, the farm has to plant 900 hectares of rice. And the spring has given us very little time to do this. For this reason, field work does not stop as long as there is daylight. Aviation is used extensively for applying mineral fertilizers, and there are nine fertilizer dispensing machines ["sowers"] engaged in the same operation. They are followed by tractors with cultivators, disk harrows, ring rollers and other equipment.

The machine operators dealing with soil planning provide for the sowing pace. In order to distribute the seeds uniformly in the field and plant them no more than 2 cm deep, the sowing machines are operated by the most experienced operators, V. Velichko and I. Khishchenko. On the day that I visited the sovkhoz, they were working on the paddies of irrigator O. Romanyuk. Stopping the tractor, she gathered a bucket of rice from the sower and carefully sowed the corners, then the strips along the drums of the irrigators and run-offs that the sowing machines cannot reach.

I had occasion to visit rice fields of this sovkhoz previously. They were always neat and kept up. But now, each paddy has been prepared with particular thoroughness. The quality of soil cultivation was attributable to the use of beet ring rollers. Tractor operator G. Gurnak laid furrows across and over the perimeter of the paddies, straight as a line, for uniform flooding of the paddies and run-off.

An enormous amount of equipment is presently concentrated on the rice fields of Crimea. For example, there are over 260 tractors at work at the Pyatiozernyy sovkhoz, where 3000 hectares will be covered with this valuable crop.

Work is harmonious at the "Road to Communism" sovkhoz and Radyans'ka Ukraina kolkhoz in neighboring Khersonskaya Oblast. There, the rice growers have a particularly large amount of troubles at the present time: they have to revive their former reputation. This oblast owed 65,000 tons of rice to the State under the current five-year plan. Steps are being taken this year to increase the harvest. It is planned to thress 55 centners of rice per hectare over a total of 10,500 hectares. The farms are better supplied than before with herbicides, fertilizers, and the sowing material is now of high grade. In other words, they have the foundation for reaching their goal. It is now a question of exemplary work by the rice growers themselves.
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MAJOR CROP PROGRESS AND WEATHER REPORTING

ROLE AND IMPORTANCE OF FIELD TECHNOLOGISTS IN OMSKAYA OBLAST

Moscow PRAVDA in Russian 6 May 80 p 1

[Article by V. Kiryasov: "Grain Field Technologists"]

> [Text] To furnish the state with 1.73 million tons of grain -- such is the obligation of the farmers in Omskaya Oblast. In the campaign to achieve high yields during the final year of the five-year plan, a special role will be played by the rural specialists -- technologists of the fields and champions of all new and leading developments.

At the field camps of the virgin land Tsvetochnyy Sovkhoz, the tractors, sowing machines and cultivators are standing in a line. All have been prepared for the field operations. The chief agronomist, M. Malinovskiy, is very calm. An experienced farmer, he has been in charge of the field husbandry operations at the farm for many years and he has aided the grain growers in obtaining high yields. This year the collective has undertaken the task of obtaining no less than 20 quintals of grain from each hectare and over-fulfilling the plan to a considerable degree. The base required for this has been created. In conformity with the local conditions and aided by scientists from the Siberian Scientific Research Institute of Agriculture, M. Malinovskiy developed and introduced an effective complex of agricultural measures. It is based upon progressive methods for tilling the land and for carrying out crop rotation plans. The complex proved its worth in the steppe zone; it is a great aid in combating wind erosion and weediness of fields and it promotes improved soil fertility.

In short, a great deal has been accomplished towards creating a foundation for the harvest. But an agronomist is aware that even the slightest error made in the spring can have a very fatal effect on the final results of the work performed by grain growers. Thus, M. Malinovskiy requires the field team leaders and machine operators to develop correct sowing tactics. Here a great deal must be taken into account. The norms for seed expenditures, the seed planting schedules, the methods for combating weeds and the structure of the plantings. Based upon the initiative of the agronomist, the board of directors and the party committee are defining more precisely the work plans for the harvest campaign and they are already proceeding with their practical implementation. The plans call for the sowing work to be carried out during the best periods and within 8-10 calendar days.

The majority of agronomists in Omskaya Oblast are displaying concern for the fields and the harvest. Today they are confronted by a great amount of work. Indeed, the volume of spring work is especially great owing to the fact that the past autumn was marked by very inclement weather. Straw must be gathered up and the principal soil tilling work carried out on large areas. The steppe expanses resound with the rumbling of motors.

The rural specialists are participating actively in the work of creating and strengthening the material-technical base for farming and improving the organization of labor.

An agronomist must be able to analyze, think and seek out new developments. Each day and each hour. Those who do not do this, inevitably fall behind. This is what occurred, for example, on a number of farms in Okoneshnikovskiy, Poltavskiy and some other rayons, where the primary party organizations concerned themselves very little with the task of raising the creative activity of the specialists. Here the readiness of the farms to carry out their sowing work leaves a great deal to be desired.

In order to solve successfully the tasks associated with increased yields from the land in Omskaya Oblast, a greater role will have to be played by the rural specialists -- field technologists and tutors of the farmers.

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CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING FIELD OPERATIONS IN TUL'SKAYA OBLAST REVIEWED

Moscow IZVESTIYA in Russian 6 May 80 p 1

[Article by A. Koptsov (Tula): "Along a Broad Front"]

[Text] During these May days, the Tula farmers are somewhat elated: the winter grains and perennial grasses endured the winter well, the soil which did not freeze during the autumn or winter has absorbed the thaw waters and warm rains have moistened the crops. All signs point to a fine harvest. And there is a good basis for this. The winter crop fields were expanded by 46,000 hectares, fall plowing was carried out completely and 30,000 more tons of organic fertilizer were applied to the fields than was the case last year. A great amount of work was carried out in connection with training the cadres of machine operators, processing the seed and repairing the equipment. The possibility exists of the heavy tractors being operated in two shifts.

This spring, with the warm weather arriving very late, special importance is being attached to carrying out the complex of field operations as quickly as possible: the soil is "suitable" on all fields at the present time and all crops -- grains, potatoes, beets and even corn -- should be sown simultaneously. Approximately 490 mechanized detachments, organized on the basis of the Ipatovo method, have moved out onto the fields. They include more than 4,000 teams, responsible for carrying out various tasks: applying fertilizers, harrowing, cultivation, sowing and providing technical support for the equipment and cultural-domestic services for those participating in the sowing work. Measures for issuing moral and material incentives to the farmers were established depending upon the work schedules and quality. The teams responsible for the technical servicing of equipment were supplied with 243 auto repair workshops, 147 technical maintenance units and 953 welding units.

The kolkhoz members and sovkhoz workers in Yefremovskiy Rayon resolved to sow spring grain crops on more than 52,000 hectares, to apply nitrophoska or granulated superphosphate to the rows simultaneously with the seed, to pack the soil and to carry out pre-germination harrowing. The plans call for 32 completely mechanized detachments to be moved out onto the fields, for close interaction to be organized among the teams, for moisture retention work to be carried out over a period of 4 days and for the cultivation and sowing of early grain crops to be completed within 7 days.

Improved use of the powerful T-150 and K-700 tractors will aid the oblast's machine operators in reducing the schedules for the carrying out of their spring work. Three hundred and ninety five soil cultivation and 953 wide-cut sowing units, consisting of 3-5 cultivators or sowing machines, have been established on the farms. Use is being made of coupled potato planters. Along the edges of the fields there were mechanized grain seed loaders and gasoline trucks. This year, concern is being displayed on many farms for both the feed and the grain. The perennial grass growing areas have been expanded by 23,000 hectares. The plans call for root improvements to be carried out on 9,000 hectares of natural meadows and pastures and surface improvements on 30,000 hectares. In addition, 21,500 hectares of irrigated haying land are to be created.

During the past few years, five interfarm feed procurement enterprises have been organized in the oblast. And they have proved their worth. Last year, for example, the Suvorov Poyma Association procured 4,070 tons of haylage, 41,200 tons of silage bulk and 1,380 tons of grass meal, or 10,069 tons of feed units. At the present time, the workers attached to associations and enterprises are applying a top dressing to the meadows.

The weather is favoring the sowing work. All of the rayons have commenced their field operations. Beginning with the very first day, each good hour of time has been valued highly on the leading farms. The farmers are devoting a great amount of effort towards ensuring that high yields are obtained during the final year of the five-year plan and that the required supply of feed is created for public animal husbandry.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

MOSCOW OBLAST SOWING OPERATIONS--The farmers in the capital oblast have commenced their sowing work in a harmonious manner. On 28 April, the sowing machines moved out onto the fields in all of the souther rayons of Moscow Oblast. This year the plans call for spring grain crops to be sown on approximately 200,000 hectares of land. The late spring has brought about changes in the farm plans. For the work to be carried out during the best agrotechnical periods, the farmers operate their units on a double-shift basis and they must organize efficient technical servicing for them. The Moscow Oblast machine operators are receiving assistance in this regard from their patrons -- workers of industrial enterprises. Representatives of plants, factories, construction projects and so forth, all of whom have mastered the profession of tractor operator, are working on the farms. The city residents have been assigned to repair and field crop husbandry brigades. Traditionally, the kolkhozes and sovkhozes in Serebryano-Prudskiy Rayon are among the first to commence the sowing work. Here the sowing schedules were re-examined and the decision was made to complete the sowing work in just 45 hours instead of the planned 55 hours. Twelve sowing complexes are operating out on the rayon's fields. The kolkhozes and sovkhozes in Moscow Oblast have resolved to obtain 30 quintals of grain per hectare during the final year of the five-year plan. A firm foundation has already been established for such a high yield -- a large quantity of fertilizer has been moved out onto the fields and a top dressing has been applied successfully to the winter grain crops. A new variety of spring wheat -- Moskovskaya-35 -- has been added to the oblast's fields. It is distinguished by its simple nature, resistance against drought and diseases and by one important factor -- in terms of cropping power, it is not inferior to the best winter varieties -- Moskovskaya-35 furnishes 60 or more quintals of grain per hectare. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 29 Apr 80 p 1] 7026

ACCELERATED WORK SCHEDULES--Saratov--This spring the oblast's farmers must sow their early and late crops simultaneously. The tremendous scale of the spring crop fields -- 5 million hectares -- is forcing the machine operators to carry out their field work on the basis of accelerated schedules. The workers assigned to Volga region kolkhozes and sovkhozes have begun carrying out their work under the slogan "100 hectares daily for each unit." [Text] [Moscow GUDOK in Russian 6 May 80 p 1] 7026

MASS SOWING OF RICE--Slma-Ata--The mass sowing of rice has commenced in the virgin land Akdalinskaya Steppe region, which is being converted into the northernmost zone of commodity rice production. For the very first time, more than 10,000 hectares of newly developed land have been made available for rice plantation use. All of the sowing units in all areas have been converted over to double-shift work schedules. The check plots are being filled up with water immediately following maintenance work on the sowing machines. [Text] [Moscow GUDOK in Russian 6 May 80 p 1] 7026

HIGH SOWING RATES--Tambov--Notwithstanding the delayed spring conditions, the oblast's farms are characterized by a high level of organization and efficient operations along the entire sowing conveyor line. This year the tempo of the sowing work is two times higher than last year. The kolkhozes and sovkhozes in the southern rayons -- Zherdevskiy, Muchkapskiy and Tokarevskiy -- have already completed their sowing of early grain crops. They completed it in just 50-60 working hours. The sowing tempo in other rayons is increasing. More than 80 percent of the areas set aside for grain crops in the oblast have already been sown. This work has been carried out in all areas with a simultaneous application of mineral fertilizer in the drill rows. [Text] [Moscow GUDOK in Russian 6 May 80 p 1] 7026

CORN SOWING OPERATIONS--Stavropol'--Yesterday the machine operators in Stavropol'skiy Kray commenced their mass sowing of corn, combined with a soil dressing of fertilizers and anti-weed herbicides. They must plant the seed for this crop on a vast area of more than 400,000 hectares. Under conditions involving the delayed warming up of the arable land, the operators of tractor units which have already been used for sowing spring grains and early annual grasses are following a condensed work schedule. [Text] [Moscow GUDOK in Russian 6 May 80 p 1] 7026

SOWING UPDATE--Saratov--This spring, the farmers of this oblast have to plant early and late crops at the same time. The enormous size of the spring crop fields, 5 million hectares, are compelling the machine operators to work in the fields on a tighter schedule. In order to cope with the field work at the optimum time, the farmers are using wide-sweep--15 m--units converted to hydraulic operation hitched to harrows, cultivators, sowers and rollers. At the present time, there are already more than 2000 such "fast" units on the fields of the Saratov region. The farmers are completing spring crop planting on the first million hectares. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 6 May 80 p 1] 10,657

RICE SOWING UPDATE--Vladivostok--Specialized sovkhozes in Primor'ye have begun mass scale planting of rice. This is proceeding chiefly on the new paddies in farms of the Prikhankayskaya plain. The developers ["ameliorators"] of the All-Union Komsomol shock construction team, who are creating a major rice-growing area in the southern part of the Far East, delivered these new paddies at the start of the season. In all, 44,000 hectares of irrigated fields will have to be planted. Sowing complexes have been created at all of the rice-growing sovkhozes. Leading machine operators from cities in this kray have come to help.

Primor'ye has decided to deliver to the nation a record amount of grain, at least 85,000 tons, in the last year of the current five-year plan. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 6 May 80 p 1] 10,657

SOWING GOALS IN KIROVSKAYA OBLAST--Kirov--The farms in virtually all regions of Kirovskaya Oblast have begun mass scale spring work. More than 700 complexes are working in the fields, including 2000 mechanized units. Repair personnel are available at any time. The farmers are taking an important test: to complete sowing within 10 days, in spite of the late spring, and to finish all field work within the agrotechnologically optimum time. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 6 May 80 p 1] 10,657

REPORT FROM KUBAN'--Krasnodar, 6 May (TASS)--Sowing work is in progress in Kuban' at an accelerated pace. The late and rainy spring has shortened to a minimum the time within which sowing must be done on the spring crop fields. Hundreds of sowing machine crews are today planting sunflowers, corn, rice and vegetables. All of the equipment is being used in a complex manner, in two shifts, for planting and cultivation. This spring has a unique feature. Following the example of the Moldavian farmers, progressive industrial technology is being used extensively at all of the farms for raising sunflowers, corn and sugar beets. For the first time, soybeans are being grown by a new method on 10,000 hectares of land in Krasnodarskiy Kray. This high-protein crop is being planted in 20 rural regions, more than 60 kolkhozes and sovkhozes. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 7 May 80 p 1] 10,657

CROPS ON FORMER SALT FLATS--Alma Ata, 7 May (TASS)--The farmers of Dzhezkazganskaya, Karagandinskaya and Tselinogradskaya oblasts have started mass sowing of early grain crops and perennial grasses on former salt flats ["solonets"--salt lake?]. The Tselinnyy imeni 25th CPSU Congress, imeni Kirov sovkhozes and dozens of other farms have planted more than a thousand additional hectares. More than 800,000 hectares of land have been added in crop rotation as a result of reclamation of Kazakhstan salt flats since the start of the current five-year plan, a third of this area this year. The sterile, salt land is becoming generous, provided it is in the care of competent farmers' hands. Specialized detachments of Goskomsel'khoztekhnika are laying a firm foundation for the harvest: they are treating the virgin lands with phosphogypsum. The scientists have recommended a special agrotechnology for the salt flats, with early sowing following spring cultivation. In this case, the seedlings appear in moist soil before a crust is formed on the ground, which is so typical of salt flats. The harvest is on a stable high level in the newly developed areas. The experience of progressive farms gives us confidence in the potential of developing the salt flats. The scientists at the Institute of Soil Science of this republic's academy of sciences have prepared recommendations on developing 10 million hectares of virgin land in the next 10 years. Enterprises in the Karatau-Dzhambul region have assumed the task of supplying a valuble product for salt lands, i.e., phosphogypsum. In the near future, they will bring annual production of phosphogypsum up to 250,000 tons. The salt flats are becoming an important reserve for increasing the production of grain and feed for the livestock industry. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 May 80 p 1] 10,657

BEATING THE WEATHER--Khabarovsk, 5 May, article by Yu. Baklanov, correspondent of SEL'SKAYA ZHIZN'--The farmers at several farms in Oktyabr'skiy and Leninskiy rayons have completed sowing of grain crops at the agrotechnologically optimum time. They counteracted the bad weather with skill, good organization of labor in sowing complexes and units. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 6 May 80 p 1] 10,657

CORN-RAISING UPDATE--Stavropol'--Mass scale sowing of corn, with application of fertilizers and extermination of weeds with herbicides was deployed yesterday by the machine operators of Stavropol'. They have to plant seeds of this crop over an extensive area of more than 400,000 hectares. With the late warming of the fields, the operators of tractor units are working on a tight schedule, and they have already planted spring grain crops and early annual grasses. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 6 May 80 p 1] 10,657

CSO: 1824

LIVESTOCK FEED PROCUREMENT

LIVESTOCK, FEED SITUATION IN CHUVASH ASSR

Moscow PRAVDA in Russian 5 Apr 80 p 2

[Article by G. Ivanov interviewing the first secretary of the Chuvash CPSU obkom, I. Prokop'yev: "Although the Burden is a Difficult One"]

[Text] In his speech at the November 1979 Plenum of the CPSU Central Committee, Comrade L. I. Brezhnev said that securing uninterrupted supplies of high-quality foodstuffs in sufficient quantities and in a large assortment is one of the most important goals arising from the party's course to raise the well-being of workers. The Chuvashskaya ASSR has good conditions at its disposal for the production of meat, milk and other products. The availability of meadows and pastures, the possiblity of producing stable harvests of feed crops enable the republic to successfully develop livestock farming. Enterprises give preference to this branch, having put a large portion of allocated resources into it. However, it still has not been possible to achieve a sufficiently effective return on them. What kinds of measures are being taken by the party and economic organs in the republic in order to correct the situation in the branch? Today the first secretary of the Chuvash CPSU obkom, I. Prokop'yev, answers the questions of PRAVDA correspondent G. Ivanov.

[Question] How can we evaluate the status of livestock farming today?

[Answer] The subject under discussion is not an easy one. Great lags have been tolerated. Last year turned out to be a difficult one and it has not yet been possible to correct the situation. The directors of enterprises and even party workers complain about the excessive intensity of goals when there are discussions about the reasons for the lags. It is said that an unbearable burden is placed on their shoulders and that is why the work remains uncompleted.

I cannot agree with such statements. Although the plans in enterprises are in fact intensive, it would be incorrect to view them as unbearable. Today we produce 90 quintals of meat and 260 quintals of milk on 100 hectares. But until 1965 we produced one-third this amount. Progress has been made, and as we see it has been rather significant. But it is not sufficient if we consider the resources that enterprises have at their disposal. Let us examine some average indicators. There are kolkhozes and sovkhozes and even entire rayons which have worked much better than this. This includes Cheboksarskiy, Morgaushskiy and Shumerlinskiy and a number of others where the goals for the 4 years of the five-year plan on the production and procurement of livestock and poultry were successfully met.

The indicators of leading workers also speak of the great possibilities.

Herdsmen N. Aleksandrov and N. Vladimirov of the Druzhba Kolkhoz, Vurnarskiy Rayon, achieve a daily weight gain of 1,130 grams from each animal when fattening cattle. This is over two times greater than the average republic level. Many of our milkmaids achieve good results. Five thousands and more liters of milk per cow are produced annually by such master workers as L. Lukina of the Kolkhoz imeni Timiryazev of Yadrinskiy Rayon, M. Afanderova, N. Alekseyeva and N. Mikhaylova of the Cheboksary Poultry Factory and others. This is over double the republic average. In other words, the resources are large. If the lagging collectives improved to the level of average enterprises and not to that of leading enterprises, this would result in a weighty increase of almost 20,000 tons of milk annually.

[Question] But meanwhile the number of lagging enterprises is growing. They are not simply slowing their pace of development but actually losing their positions. What is wrong?

[Answer] Unfortunately, this is true. Last year and the year before last milk production, for example, dropped in the republic. How can this be explained? For the sake of justice we should note that some difficulties arose in connection with the unfavorable weather conditions. But leading enterprises turned out to be stable even under difficult conditions. I feel that the reasons have to do with something else.

Since the beginning the the five-year plan there were over double the capital investments made for the development of dairy farming than for the same preceding period. The return is still not sufficient, however. In recent years the network of complexes has begun to grow, and there are already 29 in operation. As a rule, they are better supplied with technology and equipment than regular farms. Nevertheless, their capacities are being assimilated slowly and only some complexes produce over 3,000 kilograms of milk per cow. Thus, the role of such enterprises is still insignificant. They produce only 11 percent of total milk yield.

[Question] This means that the basic load is carried by regular farms?

[Answer] This will be true at least for the next few years. And we still have many problems, difficulties and errors which simply hold back milk production. Under conditions in our republic the cows of the Black-Spotted breed have thrived. In the Yaushskaya and other farms of the Sad production firm each such cow produces 5,000-5,500 kilograms of milk annually. Nevertheless, the proportion of Black-Spotted cows in the herd is not large--only 17.5 percent. In addition, the breed is so widely dispersed among enterprises that it is difficult to create breeding farms and Rosplemob"yedineniye [All-Russian Breeding Association] fulfills orders extremely unsatisfactorily--instead of 7,000-8,000 head of Black-Spotted cattle they allocate no more than 1,000 annually. Kolkhozes and sovkhozes frequently buy animals riskily--the animals do not have a classification and are low in productive qualities. Of course this is not normal. We are counting on serious aid on the part of the RSFSR Ministry of Agriculture and Rosplemob"yedineniye. At the same time we must admit that our own republic agricultural organs are at fault in the low level of management of breeding. Barrenness in cows is great and as a result there is an underproduction of 17,000-18,000 calves annually. Measures have now been taken to improve the situation.

[Question] We know that the question of questions is feed. How is this problem being solved?

[Answer] Our kolkhozes and sovkhozes annually procure 65-70 percent of the needed feed. The problem is that in many enterprises the productivity of forage crops is low. For example, 100-150 quintals of green mass and about 25 quintals of hay are harvested per hectare. Early last year the feed problem was discussed seriously at the plenum of the party obkom. The course taken was the development of an independent forage branch. Some experience has already been collected. The collective of the Leninskaya Iskra Kolkhoz stepped in with a valuable initiative. Here a detachment on feed production was created and it proved that it was possible to produce 32-35 quintals of feed units per standard head of cattle. The initiators called upon the feed-producing brigade of the Yangorchino Kolkhoz for competition. This initiative has already been supported by many enterprises. In the spring the area in pulse and silage crops and root crops was expanded greatly. However, the drought in May and June hindered the development of plants and the yield turned out to be small. In other words, the feed problem will remain a priority in the future.

[Question] Livestock farming is called a nation-wide matter.

[Answer] Yes, sponsors of organizations are rendering a great deal of aid to enterprises, especially during the period of feed procurement and harvesting operations. Village workers are grateful to them for this. But kolkhozes and sovkhozes also have partners who are called upon to help not only as a token of friendship, but because they must.

What actually happens? In the last 4 years reclamation workers did not put 6,300 hectares of cultivated pastures and haylands, 1,600 hectares of drained lands into operation. Another great underproducer is the Chuvashskoye Territorial Administration, whose builders have tolerated significant lags in the introduction into operation of many agricultural structures. Moreover, many of these structures are submitted with incompletions, which holds back the assimilation of capacities. There are still many complaints about designers. In 8 years the cost of one livestoc place doubled. It is therefore not surprising that animal husbandry incurs losses.

The relationship between enterprises and Goskomsel'khoztekhnika [State Committee of the Agricultural Equipment Association] has not been organized. Large quantities of fertilizer are delivered to farms, but because of the poor organization of servicing it machines frequently operate with interruptions. I feel that a single engineering-technical service should be created in the village. Material incentives should depend exclusively on the products produced by agriculture.

[Question] Of course all of this is important. The relationship between the village and its partners must be improved. But are there internal resources in enterprises?

[Answer] Without doubt. A key factor is the level of training of cadres, their initiative. It is true that in contrast to other rayons in the country our republic is not experiencing an acute shortage of workers in the village. There are 27,500 persons working in animal husbandry, and this is a sufficient number. Our goal is to constantly improve their training, to improve the conditions of labor and to persistently introduce technology. We must admit that there are still many incomplete areas here. The level of farm mechanization is almost half the average in the RSFSR. In many enterprises the proper concern is not always shown for improving cultural and everyday conditions for livestock farmers. There are rayons where not a single children's facility has yet been built.

The level of work with cadres does not fully correspond to growing tasks. Individual party raykoms do not always thoroughly study the business-like and political qualities of workers and deal poorly with resources. The Alatyrskiy, Komsomol'skiy, Morgaushskiy and Yal'chikskiy CPSU raykoms were subject to criticism at the obkom plenum for serious shortcomings in the selection and training of enterprise directors. There have been cases in which the desire to look better pushed some of our workers in positions of responsibility to make additions and to distort accounts. It was necessary to take strict measures, including exclusion from the party.

Sometimes it happens that the raykom makes useful decisions, but it is not possible to implement them.

[Question] There is no question that in order to deal with the plans and obligations successfully, village workers must solve difficult problems. What are the prospects for the development of the branch?

[Answer] Recently there was a meeting of the party-economic aktiv of the republic. The discussion about the situation in agriculture was exacting and demanding. Its participants spoke about the great possibilities and resources that still have not been utilized. Special attention was given to the development of the forage base. Village workers calculate that they will produce no fewer than 300 quintals of green mass of corn, 350 quintals of root crops and 30 quintals of hay from perennial crops per hectare. Such harvests will enable livestock farmers to increase the gross production of meat by no less than 13,500 tons this year as compared to last, and to increase milk yield from cows by 150 kilograms per cow.

The overwintering of livestock is continuing in enterprises. This is a serious test for party, soviet, and agricultural organs and for all village communists. Feeds are being strictly accounted for, consumption has been determined and the efficient utilization of forage has been organized. No matter how difficult the test, village workers intend to pass it successfully, remembering that an increase in production output on farms depends primarily on the conscientious attitude toward work and on the skilful use of resources.

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CSO: 1824

LIVESTOCK FEED PROCUREMENT

FEED SITUATION DISCUSSED IN LENINGRAD AKTIV

Leningrad LENINGRADSKAYA PRAVDA in Russian 5 Apr 80 p 1

[Article: "Strengthening the Feed Base of Public Animal Husbandry"]

[Text] Yesterday at the House of Political Education of the CPSU obkom an aktiv meeting was held of all party, soviet, trade union and komsomol organizations jointly with the directors of agricultural enterprises and institutions of Leningrad Oblast. The topic under discussion was the goals for continued intensification of feed production in the light of the requirements of the resolution of the CPSU Central Committee and the USSR Council of Ministers, "On Supplementary Measures to Increase the Production of Coarse and Succulent Feeds in 1980 and to Improve their Quality."

A speech was made by the deputy chairman of the ispolkom of the Leningrad Oblast soviet, V. A. Goryashin.

At the conference great emphasis was placed on the March 1965 Plenum of the CPSU Central Committee, whose decisions were based on an overall analysis of the situation and which clearly determined the ways and means of achieving the planned goals. It was during the realization of the requirements of this document that there was a firm confirmation of the most characteristic features of party managment of agriculture such as a strict scientific approach to the rules for developing the production power of the village, the orientation toward an intensive management method, the complex solution of economic and social problems, the improvement of management, and an improvement in the effectiveness and quality of work. Important stages in the realization of the agrarian policies of the CPSU were reached with the party congresses and the plenums of the CPSU Central Committee, particularly the one in July 1978.

The participants in the conference noted the exceptional services in developing a scientifically-based program on the consistent development of agriculture by the General Secretary of the CPSU Central Committee and Chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev. They spoke about the fact that Leningrad workers, like all Soviet people, were very happy to see Leonid Il'ich Brezhnev receive the Lenin Prize for his excellent triology. Leonid Il'ich's speech at the ceremonial meeting in

Moscow was greeted everywhere as a battle program of action, as an inspiring call to fulfill the goals established by the party.

The huge scale of work to transform agriculture that has been completed since the March 1965 Plenum of the CPSU Central Committee is clearly evident in our oblast. Thanks to the constant attention and help of the party's central committee the active transformation of the branch into a highly developed sector of the socialist economy was begun.

During these years 3.5 billion rubles of capital investments were directed at the development of the material-technical base of the Leningrad agro-industrial complex. There has been a significant growth in the delivery of mineral and organic fertilizers, technology and equipment. The annual volume of agricultural reclamation operations has almost tripled. Gross production of the public sector surpassed the 1964 level by 2.6 times; labor productivity--by 2.7 times.

The main result of the work of Leningrad workers toward the fulfillment of the decisions of the March 1965 Plenum of the CPSU Central Committee was the significant growth in the intraoblast production of agricultural products. During this period state procurement of poultry products increased eightfold, of milk--almost threefold, meat--2.7 times, and vegetables--by 79 percent.

The participants of the conference discussed one of the key factors that will affect the fulfillment of plans and socialist obligations for 1980 and for the five-year plan as a whole on the production and sale to the state of livestock products. The discussion was about the radical improvement of feed production, as required by the party's central committee, about creating a stable feed base for public animal husbandry in each enterprise in the near future.

The resolution of the CPSU Central Committee and the USSR Council of Ministers once again directs the attention of party, soviet and agricultural organs to the fact that a shortage of coarse and succulent feeds is one of the main reasons for low productivity in animal husbandry and for the overconsumption of grain. In the future this cannot be tolerated.

Village workers have a specific and immediate goal--to utilize all reserves in order to significantly accumulate reserves of hay, haylage, silage and root crops. Additional technology and materials are being distributed for this purpose, privileges are granted for work credit and for stimulating the work of feed procurement.

Last year the bureau of the CPSU obkom examined the proposals of agricultural organs and departments of VASKhNIL [All-Union Lenin Academy of Agricultural Sciences] for the Non-Chernozem Zone of the RSFSR regarding the complex development of a feed base and of the mixed-fodder industry of the oblast. The practical realization of this program enabled us already in 1979 to increase the volume of feed procurement by 17 percent. The results are not bad, it was said at the meeting, but they do not fully correspond to the possibilities that exist in the Leningrad fields and most importantly they by far do not meet the needs of the growing herd. This is why it is important now to secure these results and then to surpass them.

Leningrad obligations foresee increasing the feed procurement volume of enterprises to 800,000 tons of feed units. In other words, the level that has been achieved must be surpassed by 30 percent. The goal is not a simple one and in order to reach it it is essential to produce large yields of feed crops, to preserve them and to effectively utilize each kilogram of hay, haylage, silage and root crops.

The first serious test in connection with this will take place during spring sowing. It was emphasized at the meeting that all of the possibilities exist for improving the structure of sowing fields, for increasing the proportion of high-yield crops and for allocating the best land for them prior to the beginning of field operations. The entire complex of questions that determine the yield for the final year of the five-year plan should be taken under strict party control.

The participants in the meeting said that one subject of special concern should be the daily, time-consuming work with cadres to whom feed production has been entrusted. Under conditions of thorough specialization one of the decisive factors in raising effectiveness, in addition to strengthening the material-technical base, is the high professional level of specialists and workers, their skill in widely utilizing the achievements of science and progressive practice.

It was noted that a special role in these questions belongs to agricultural associations, primarily to head sovkhozes, which mirror the status of economic activities as well as of political and organizational work in the collective. Party committees and secretariat councils have a great deal of responsibility. Coordinated and harmonious work by all participants in the feed conveyor will depend on their active positions.

There was a discussion about the fact that within the complex of measures on the development of feed production a central place is given to mechanized cadres. As a result of the measures that have been taken in the last few years it has been possible in principle to solve the problem of supplying the majority of sovkhozes in the oblast with first-class cadres. Last year alone over 3,000 people were trained in the use of new and modern technology. The participants of the meeting noted that success will depend on what conditions will be created at the job for the highly productive labor of machine operators. We must follow the tried and tested route of creating large mechanized links which operate according to the principles of cost-accounting and which are fully responsible for the final results of labor, for the cultivated and preserved harvest.

We cannot tolerate a situation which sometimes exists in which because of anonimity the fundamental factors of a high degree of effectiveness--the quality of plowing work, sowing, crop care and finally of harvesting--are lost. The machinist, as the leading figure in modern agricultural production, must receive a full restoration of rights as the manager of the land. Everything to the slightest details must be foreseen--the conditions for wage payments that encourage quality and the utilization of progressive technology, dependable material-technical services.

In our oblast the Ipatov method of labor organization is widely utilized. It is on its basis that good results have been achieved in the use of feed procurement machinery in Luzhskiy and Kingiseppskiy rayons.

Reclamation organizations must play a more active role in raising the productivity of feed crops. The resources of our reclamation fund have by far not been used up. It is necessary to determine the order in which to assimilate lands according to an economic basis. Most important, the reconstruction of agricultural lands must be managed on a larger scale.

At the present time over 130 cost-accounting specialized subdivisions for feed production are being formed in the oblast's enterprises. Already this year they must make themselves known and bring a total change to feed production. The organization of their operations requires the constant attention of party, soviet and agricultural organs.

Party and trade union organizations must widely begin socialist competition to achieve the highest indicators by each link, detachment and association. The effect of competition will be greater the more flexible the system of moral and material incentives, and if each participant knows the results of his labor daily.

As noted at the November 1979 Plenum of the CPSU Central Committee, great losses to animal husbandry are incurred by the low quality of feed and by the rations that are unbalanced in protein. These shortcomings are to a certain degree characteristic of a number of agricultural associations in our oblast.

At the conference it was said that many losses are the result of the insufficient development of the material-technical base of feed production. There can be no skimping with the allocation of resources for this purpose, and the building of facilities for feed production must be viewed as a priority goal of state importance. The collectives of administrative industrial enterprises must provide a great deal of aid to meet this goal.

Party gorkoms and raykoms and local soviets of people's deputies are primarily responsible for creating an atmosphere of great demandingness to fulfill these goals. It was emphasized at the meeting that it is very important now, on the threshold of the 11th Five-Year Plan, to arm village workers with a clear program of action and to coordinate all aspects of the activities of party, soviet and agricultural organs in order to reach the goals that are set.

The results of the first quarter attest to the fact that in widely starting socialist competition in honor of the 110th anniversary of V. I. Lenin's birth, Leningrad workers have made an adequate beginning for fulfilling the established plans and obligations of the final year of the five-year plan. However, the tasks that are before us require that we improve all the activities of party and economic organs. A framework of demandingness and exactingness must be created on all plots and in all links. This will encourage the finding of new resources, an improvement in effectiveness and quality and the strengthening of organization and discipline.

The members of the conference expressed their firm belief that all communists and workers of Leningrad and the oblast, in recognizing their responsibility to implement the agrarian policies of the party, will secure the successful conclusion of the 10th Five-Year Plan and will make a worthy contribution toward preparations for the 26th congress of our Leninist party.

Speaking at the meeting were the first secretary of the Tikhvinskiy gorkom of the CPSU, A. S. Yefimov, the deputy chairman of the presidium of the VASKhNIL department on the RSFSR Non-Chernozem Zone G. V. Blagoveshchenskiy, the director of the mechanized detachment on feed procurement of the Pashskiy Sovkhoz S. A. Anikin, the secretary of the party committee of the Syaglitsy sovkhoz production association I. V. Malyshev and the brigadier assistant of the livestock farm in the Krasnyy Oktyabr' Sovkhoz L. V. Ivanov and others.

G. V. Romanov, member of the Politburo of the CPSU Central Committee and first secretary of the Leningrad Oblast party committee, spoke at the meeting.

Participating in the work of the conference were the secretary of the Leningrad Oblast CPSU committee G. A. Posibeyev and the chairman of the ispolkom of the Leningrad Oblast soviet A. N. Shibalov.

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LIVESTOCK FEED PROCUREMENT

STRAW FOR LIVESTOCK FEED IN THE UKRAINE

[Editorial Report] Kiev PRAVDA UKRAINY in Russian 16 February 1980 p 2 and 10 April 1980 p 2 has urged livestock men there to look to chemically treated straw to augment livestock feed supplies. The first instance is a 1,200-word article by A. Mamenko appearing in mid-February. The author begins by admitting that despite straw's prominent place in the feed balance at many kolkhozes and sovkhozes, it is poor in nutrients, especially protein. The article continues, stating that straw is primarily a ballast feed, necessary for normal food processing and furnishing the proper volume to the ration. The author goes on to mention various modes for preparation of straw for feeding to livestock. The article concentrates its attention on barothermic processing and on details and advantages of this mode. The barothermic method is getting the chance to prove itself in Kiyevskaya Oblast, where certain rayons, especially in the woodland area, laid in less feed than in preceding years due to adverse weather conditions.

While reporting on the details and advantages of feeding barothermically treated straw, the author aims one last admonition at the livestock men:

"Certainly its use in no way relieves enterprise specialists and leaders of the necessity of increasing the feed base for animal husbandry in every way."

A second article appears early in April. This one, an 800-word article by A. Mamenko and N. Zorobko stresses the importance of straw in stretching livestock feed supplies.

"At the end of the overwintering period the decrease in feed laid in back in the autumn becomes all the more noticeable. And therefore its well thought out, rational utilization, in particular, the skillful inclusion of straw in the feed ration takes on a special urgency."

The article goes on to give details on various chemical treatments to enrich straw foruse as livestock feed. These two articles represent at least the fourth and fifth occasions on which the use of straw has been recommended for feed. Similar articles appeared from neighboring Belgorodskaya Oblast in February and Krasnodarskiy Kray in December and January.

CSO: 1824

LIVESTOCK FEED SITUATION IN THE UKRAINE

Kiev SIL'S'KI VISTI in Ukrainian 24 Apr 80 p 1

/Editorial on: "For Farms With Good Supplies"/

/Text/ The strengthening of the feed base has always been and remains one of the chief and most important tasks of party organizations, soviet and agricultural organs, and all rural workers. In the CC CPSU and the USSR Council of Ministers decision entitled: "On additional measures to increase coarse and succulent feed in 1980 and raising their quality" particular attention is given to the solution of this task.

Appearing at the April (1980) CC Ukrainian Communist Party Plenum the first secretary of the CC Ukrainian Communist Party, comrade Shcherbyts'kyy, said: "The task lies in the complete fulfillment of all additional measures to increase feed production and raising their quality, to increase feed procurement already this year by not less than a third and to obtain up to 35.3 quintals of feed units per conditional cattle head, to solve the problem of providing for cattle raising needs completely in the next five-year plan."

High indices in feed production are achieved each year by kolkhozes and sovkhozes in the Tul'chynskyy Rayon, Vinnitskaya Oblast, Mar'yinskyy Rayon - Donetskaya Oblast, Krasnogvardeyskyy, Nyzhnogorskyy Rayons - Krymskaya Oblast, Stryyskyy and Kam'yansko-Buzkyy - Lvovskaya Oblast, Izmayilskyy and Ovidiopol'skyy Rayons - Odesskaya Oblast, Bilozerskyy Rayon - Khersonskaya Oblast, Volodymyretskyy - Rovenskaya Oblast, Cherkasskyy Rayon, Cherkasskaya Oblast, Vyzhnytskyy and Zastavnivskyy Rayons, Chernovitskaya Oblast and several others. Their experience in growing abundant feed crop harvests, raising meadow and pasture productivity, and organization of efficient and high quality feed procurement this year should be copied by all.

The late and cool spring made some changes in the working plans of farmers and machine operators, it created some difficulties. Under these circumstances work organization and efficiency are needed.

The field work front is moving gradually to the north of the republic. In the spring period it is essential to conduct timely sowing of forage, silage and other feed crops. However, attention is not given to this matter everywhere. Let us consider perennial grasses, for example. During the last few years feed crop sowing plans are systematically neglected by a number of farms in Volynskaya, Kievskaya, Sumskaya and Khmelnitskaya Oblasts. There is a low 22 to 29 percent specific weight of perennial grasses in the feed crop structure of Voroshilovgradskaya, Krymskaya, Nikolaevskaya, Kharkovskaya and Khersonskaya Oblasts.

Far from all kolkhozes and sovkhozes concern themselves properly with growing annual grasses, corn for silage, and feed root crops. Last year in the sovkhoz "Dzvonkove" in Kievskaya Oblast a low yield was obtained of corn for green chop and silage, in kolkhoz "Avangard", Stavyshchenskyy Rayon in the same oblast there was not enough hay from annual grasses. In the Ternopol' area only 153 quintals of feed root crops were raised, on the average during the last four years not more than 200 quintals are harvested here. Many farms in the Kirovogradskaya and Voroshilovgradskaya Oblasts also obtain low yields in feed root crops and corn for silage.

Experience has shown that the best organizational form in feed production consists of mechanized brigades, detachments or teams provided with essential equipment, fertilizers and herbicides. This allows for personal responsibility in the care of feed crops, high labor productivity, the most effective use of the equipment and assures a high quality work performance.

The task of party, soviet and agricultural organs, and kolkhoz and sovkhoz managers is to introduce progressive methods everywhere, to assure an accelerated tempo and high quality work in the sowing and care of feed crops. Only in these conditions can a good harvest be guaranteed.

Important reserves in supplementing feed supplies are the intensive use of irrigated lands, expansion of repeated sowing and the use of multiple-component pulse-cereal mixtures. Full utilization of these reserves will permit not only an increase in the production of coarse and succulent feed, but will also raise the protein yield from this area.

High quality and timely feed procurement is very important. The Ipatov method should be introduced everywhere with proper beforehand preparation.

In fulfilling the projected measures on increasing the productivity of natural feed lands which take up almost 17 percent of agricultural lands, and in the Volynskaya, Zakarpatskaya, Lvovskaya, Rovenskaya, Chernigovskaya Oblasts 28 to 52 percent, it is very important to accomplish the whole complex of crop-technological work projected to increase the yield of feed units from meadows and pastures.

The growth in the role of the field in feed production along with specialization and agricultural concentration is unequalled. Large animal complexes as well as ordinary farms, interfarm enterprises and associations for the production of beef, pork, milk, eggs, heifer raising should depend on their own feed base. The cattle raising complexes at kolkhozes "Oktyabr" in Mar'yinskyy Rayon, Donetskaya Oblast, "Ukrayina" Gorodotskyy Rayon, Khmelnitskaya Oblast, imeni Ostrovs'kyy, Man'kivskyy Rayon, Cherkasskaya Oblast, Yampil's'kyy interfarm enterprise in the Vinnitskaya Oblast and others may serve as an example of feeding cattle with high quality feed of their own production.

Unfortunately, a number of complexes still feel a shortage of feed. Instead of fully utilizing field feed production reserves, some managers of agricultural organs, kolkhozes and sovkhozes attempt to balance the rations from state resources. In some places this practice instead of a rebuff finds approval.

It should be remembered that the basic source of grain forage production, hay, haylage, silage, other coarse and succulent feed is the field, its harvest possibilities should be utilized fully.

9443
CSO: 1811

LIVESTOCK FEED PROCUREMENT

MUSTARD-FAMILY FEED CROPS DESCRIBED

Minsk SEL'SKAYA GAZETA in Russian 15 Apr 80 p 2

[Article by N. Glovatskiy, chief of the administration for feeds of the BSSR Ministry of Agriculture and V. Shlapunov, deputy director of the Belorussian NIIZ (expansion unknown): "More Plantings of Mustard Family Crops"]

[Text] "...to achieve in 1980 a significant increase in production and improved quality in hay, silage, feed root crops and other feeds." (From the decree by the CPSU Central Committee and the USSR Council of Ministers "Concerning Supplementary Measures for Increasing the Production of Rough and Succulent Feeds in 1980 and for Raising Their Quality.")

The most important condition for further increases in the production of livestock products on the kolkhozes and sovkhozes of the republic has been and remains the creation of a solid feed base. However, the state of feed production on many farms at the present lags significantly behind the requirements of livestock breeding both in the quantity of feeds produced and in their quality. The provision for digestible protein in feeds during the penned period is particularly low. Elimination of the deficit in protein in the cattle feed allowance is therefore a most important task.

During recent years a number of kolkhozes and sovkhozes have been making ever greater use of such resources for intensifying feed production as the cultivation of new feed crops and primarily of mustard, oil-yielding crops, namely, winter and spring rape, oil-yielding radishes and white mustard.

The value of the mustard family of crops lies in the fact that they produce a high yield of green mass under any weather conditions. Moreover, the short period of time between the appearance of the shoots and harvesting maturity makes it possible to harvest several times during the growing period and thus to utilize these crops both for green supplementary feeds from spring until late fall and for preparing silage and grass meal.

In order to provide high harvest yields of these crops in post-mowin d late-summer intermediate plantings, it is already important now to determin the place and times for growing the crops and the application rates for the organic and mineral fertilizers. This year a maximum amount of oil-yielding radish and spring rape plantings must be utilized to produce seed.

This page briefly discusses the agrotechnology and methods of growing the basic mustard family crops which must become widely disseminated throughout the fields of the republic.

Oil-Yielding Radish

"A crop of great possibilities," is the response on the "Leninist Call" Kolkhoz in Krichevskiy Rayon concerning the oil-yielding radish. This is not the first year it has been grown here, and it is used for green feed, for silage, for preparing grass meal and for feeding. Each hectare planted yields more than 300 quintals of green mass.

The oil-yielding radish is grown on a grain crops farm. Soil preparation before planting is carried out as it is for early spring crops. Two quintals of superphosphate and 1.5 quintals of potassium salt are applied to each hectare. The soil is packed with rollers both before and after planting.

Planting on the kolkhoz is done with a SZT-3.6 seeder at a seeding rate of 20 kilograms per hectare. After planting there is no cultivation during the growing period. The green mass is harvested for feed during the blossoming period. There are two to three cuttings per year.

On the kolkhoz imeni Lenin in Orshanskiy Rayon, oil-producing radishes cover more than 50 hectares. And 450 to 500 quintals of green mass are harvested per hectare. In the "Starovshchina" production section on the kolkhoz "Rossiya" in Shchuchinskiy Rayon even more green mass from the oil-yielding radish is produced, namely, 600 quintals per hectare.

Last year the kolkhoz imeni Uritskiy in Gomel'skiy Rayon grew oil-yielding radishes in after-harvest plantings on 400 hectares of land. They were planted after the grain harvest, namely, winter rye and barley. The harvest yield of green mass for the entire planted area was 250 quintals per hectare. It is typical that green mass from areas planted during the second third of August is fed to livestock in October.

This is a high-protein crop capable of producing 6 to 8 quintals of digestible protein per hectare. In protein content, the oil-yielding radish is not inferior to pulse grasses. There are 12 to 14 feed units per 100 kilograms of it. The green mass from radishes is also rich in mineral nutrients. Phosphorus makes up a significant proportion of the ash elements. There is also a considerable amount of potassium, calcium and nitrogen. The nutritive qualities of the crop are also determined by the presence of microelements in it. It is on a part with other high vitamin plants in its content of vitamin C. It is also rich in carotene.

The oil-yielding radish is a cold-resistant plant. The seed begins to germinate at a temperature of 2 to 3 degrees above zero. Mature plants are harmed by frost only at a temperature lower than -7 degrees. This fast growing plant has a short growing period. The length of time between planting and the appearance of sprouts is 4 to 6 days in the presence of sufficient amounts of moisture and warmth, between the appearance of sprouts and mowing maturity (for a summer planting) is about 50 days and from the appearance of the sprouts until seed maturity (for a spring planting) is about 70 days.

Due to its cold resistance and ability to grow quickly, green mass from the oil-yielding radish is a future feed crop which will make it possible to extend the period of feeding green mass to livestock in the fall by 20 to 25 days and at the same time to reduce the expenditure of expensive fodder which has been prepared for the winter.

It must be planted in sections with medium and sand loam soils which have a sufficient reserve of nutritive substances. It grows well in dry and cultivated peat soils. It is most successful in weakly acid soils.

In intermediate plantings the oil-yielding radish is grown after pulse crops and pulse-cereal mixtures which are utilized for green mass, and in late-summer plantings it is grown after winter rye and winter wheat and barley which have been harvested for grain.

Soil preparaton for the oil-yielding radish must be done immediately after harvesting the preceeding crop. This consists of plowing, cultivation before planting with harrows and rolling.

In producing a large harvest of green mass in a brief period of time, this crop requires a sufficient amount of nutritive substances. In connection with this, it responds well to the fertility of the soil and to applied fertilizers, especially to nitrogen fertilizers.

For planting, it is possible to utilize the farm's existing linseed, grain crop and other seeders with anchor plowshares. The depth of seed planting is 2 to 3 cm. The method of planting is continuous row and the rate of planting is 25 to 30 kg of dry seed per hectare.

Oil-yielding radishes are harvested for green feed during the phase of mass blossoming, namely, the beginning of fruit formation. Harvesting at a later stage is recommended for purposes of ensilage. Ensilage of oil-yielding radishes is best with other crops. Excellent ingredients for combined ensilage are sunflowers, hay from grain crops, feed cabbage, sugar beat tops, mixed grasses and so on. Green mass from the oil-yielding radish can serve as the raw material for producing grass meal.

Growing the oil-yielding radish seed is simple and possible for every farm. If the agrotechnology is followed in the process of production, it is possible to grow 8 to 12 quintals of seed per hectare. The seed plants must be grown in cultivated, medium rich, non-acid soils which are not waterlogged and which are ready early in the spring for plowing. The best preceding crops are winter row crops which remove weeds from the soil, and there should not be any plantings after mustard family crops. The methods of soil preparation for planting are the same as for the other early crops.

The planting periods are the same as for grain crops. The rate of seeding is 15 kg per hectare. The method of seeding is continuous row. The amounts of fertilizers in preplanting cultivation are: nitrogen 60 to 70 kg, phosphorus 50 to 60 kg, and potassium 90 to 100 kg of active substances per hectare. With uniform maturation the harvest is carried out with direct combining, and with irregular maturation it is done selectively.

After threshing, the straw from oil-yielding radishes can be used as feed for livestock as it is readily eaten by cattle, horses and sheep.

Oil-yielding radish seed which the republic's kolkhozes and sovkhozes now have must be planted for establishing seed plants for the exclusive purpose of growing green mass.

Rape

Summer Crop

As a feed crop, summer rape has only been grown in the republic for a short time, however, due to its high productivity it is becoming more widespread.

Summer rape yields a rich green mass which livestock eat well. There are 125 to 247 grams of digestible protein in one feed unit. A characteristic of the nutritive substances which comprise summer rape is its high digestibility. The highest concentration of these substances is during the blossoming stage.

The period between planting and sprouting is 5 to 7 days and between sprouting and mowing maturity for a spring planting is 50 days and for second plantings it is 60 days. Full maturity of the seed requires 80 to 90 days.

This crop is distinguished by its good aftermath. A spring planting yields 2 to 3 mowings after vegetation with a harvest of 650 to 870 quintals per hectare. Its productivity is also high in secondary plantings. At the experimental farm "Zhodino" in Minsk Oblast, the July 15th planting of summer rape produced 569 quintals of green mass per hectare, the July 29th—504 quintals and the August 5th late summer planting—381 quintals per hectare.

The kolkhoz "Rossiya" in Shchuchinskiy Rayon produces a good harvest of green mass from this crop. Summer rape is planted here after feeding winter crops as green mass. The planting is done in light, sandy loam soil with a narrow-row, grain seeder. In preplanting soil preparation 2 quintals of ammonium nitrate and 1.5 quintals of potassium salt are applied per hectare.

For spring plantings, good crops to precede summer rape are grain and row crops through which organic fertilizers were introduced.

The cultivation system is the same as for a planting of early, summer grain crops.

Rape responds well to the application of organic fertilizers, and therefore it is advisable to apply them with the preceding crop at the rate of 30 to 40 tons per hectare along with mineral fertilizers in the dosage N-60 P-30 K-50 applied during the preplanting cultivation.

Summer rape can be grown using the wide row and continuous row methods. The planting rate for the continuous row method is 10 to 12 kg per hectare and for the wide row method it is 5 to 7 kg. The seed is fine and therefore, for uniform planting, it is recommended that it be mixed with inert material (sawdust, sifted mulch and small, sifted components of superphosphate). Planting depth is 1.5 to 2 cm. Continuous planting is done with ordinary grain seeders with anchor plowshares.

It is very important that rape seed can be produced in any area of the republic. It is necessary to plant it in the early spring using the row method at a planting rate of 10 to 12 kg of germinating seed per hectare. The seed is harvested with direct combining when the pods have turned yellow and the seeds have turned brown; this is carried out at the end of August and beginning of September but in very short periods of time in order that seed not be lost. The yield of harvested seed under the best conditions amounts to 10 quintals per hectare. Thus, the coefficient of increase for summer rape is high (1:100), and with correct organization of seed growing for this crop, it is possible to provide seed for the feed plantings of every farm without difficulty.

Winter Crop

During the last 3 to 4 years the Kolkhoz imeni Gastello in Minsk Rayon has utilized winter rape together with other mustard family crops for feeding livestock. The green mass harvest yield is 300 to 350 quintals per hectare. This feed yields high output because livestock eat it well. These feeds are rich also in nutrition. Based on totally dry plants, winter rape contains 17 percent protein, 4.5 percent fat, 10.5 percent ash, 12 percent cellulose and 55 percent BEV (nitrogen-free extractive).

Winter rape is a typical winter crop. When it is planted in the fall, sprouts appear in 5 to 7 days, real leaves form a week after the appearance of full sprouts, and the plants begin the winter in the rosette stage.

In the spring the plants begin to grow early and develop very quickly. Buds form 10 to 20 days after the beginning of spring growth and then blossoming begins. Winter rape is resistant to lodging and grain loss.

When winter rape is planted in the spring, the plants remain in the rosette stage during the entire growing period and are capable of forming abundant green mass. This biological characteristic of winter rape makes it possible to grow it for green mass in spring, post-mowing and late-summer plantings. The harvest yield of green mass from winter rape for two mowings reaches 500 quintals per hectare for spring plants, 300 for post-mowing plantings, 250 to 300 for winter, intermediate plantings and 100 to 150 quintals for late-summer plantings.

Good harvest yields can be produced on limed and fertilized soils. For intermediate, post-mowing plantings the best preceding crops are lupine, maple peas and vetch-oat mixtures and for late-summer plantings the best are winter rye, wheat, barley and early potatoes.

Soil preparation for post-mowing and late-summer plantings must be done immediately after harvesting the preceding crop and consists of plowing, cultivation with harrows and packing with cleated rollers.

For post-mowing, late-summer and winter, intermediate plantings, it is best to apply fertilizers to the preceding crop at a rate of not less than 40 tons per hectare. In this situation mineral fertilizers are applied in the following amounts: N--60 to 80 kilograms per hectare, P--60 to 80 and K--80 to 90 kilograms. If organic fertilizers have not been applied, then the dosage of nitrogen must not be less than 90 kilograms per hectare. It is best to apply phosphorus and potassium fertilizers to the preceding crops in the spring, nitrogen fertilizers before planting the rape or all mineral fertilizers during plowing before planting.

Planting times also affect the harvest yield of green mass. The time for post-mowing and late-summer planting is immediately after harvesting the preceding crop but not later in the southern area than 1-15 August and in the northern area 1-10 August.

Spring, post-mowing and winter plantings are best done using the wide-row or alternate-row methods, while the continuous-row method is best for late summer plantings. The seeding rate for continuous-row and alternate-row methods is 10 to 12.5 kg per hectare and for the wide-row method it is 7.5 to 10. To achieve level sprouts, the seeds must be planted uniformly to a depth of 1.5 to 2 cm.

Winter, intermediate plantings and plantings for seed in the early spring are harrowed.

With the appearance of the mustard family pennyroyal, the sprouts are dusted with 2.5 percent methyl parathion and 12 percent GKhtsG (Hexachlorocyclohexane) (10 to 12 kg per hectare) or are sprayed with a solution of trichlorfon (1 kg per hectare).

Winter Colza

Whether it is sown in spring or summer, winter colza does not form generative organs but grows a leafy mass for two to three mowings and yields up to 500 quintals and more of green mass and 50 to 60 quintals of dry material per hectare in sandy loam and loam-like soils. It withstands fall frosts easily and afterwards continues growing, producing green mass until the end of October. It is therefore a valuable crop for post-mowing and late-summer plantings.

This crop is successful in weakly acid or nearly neutral soil conditions.

Winter colza can be utilized in the fall as feed for fattening or as green supplemental feed. The pellets and silage prepared from winter colza are also distinguished by their high nutrition. In the spring, winter colza should not be used for feed later than the blossoming stage.

Due to its high cold resistance, winter colza grows until the average daily temperature drops below +5 degrees and produces in post-mowing plantings (July) 270-290 quintals and in late-summer plantings (August) 150-250 quintals of green mass per hectare.

If colza is not harvested in the fall it winters well and in the spring quickly begins to grow, forming stems, flowers and seeds. In the spring it is ready for harvest for green mass 7 to 8 days earlier than winter rye.

Winter colza winters best if before the beginning of winter the plants succeed in forming a well-developed rosette with 5 to 8 real leaves. It achieves this stage if planted not later than August 1-10 in the central part and August 1-15 in the southern part of the republic.

Winter colza has been grown for more than 5 years in production plantings on the kolkhoz "Pobeda" in Maloritskiy Rayon. The area for it has reached 120 hectares of sandy soil. Winter colza is planted on this farm mainly after harvesting winter rye for grain. The straw is immediately removed from the fields and they are plowed. The following fertilizers are applied: 50 to 60 kgs of nitrogen and potassium and 35 to 50 kgs of phosphorus fertilizers per hectare.

The continuous-row method of planting is used at the rate of 10 kgs of germinating seed per hectare. Winter colza is utilized on the farm for the dairy herd using the pasture method from the end of September. The plantings are split up into strips of land which are enclosed by electric fences and which are used for feed sequentially. Winter colza which is designated for spring use is not used for feeding in the fall because plants in such plantings do not manage to develop leaves by the end of the growing period and winter poorly. A small area, 2 to 3 hectares, is set aside for seeds and produces well developed foliage before the beginning of winter. There is a yield of 20 to 25 quintals of seed which is sufficient for planting 200 to 250 hectares. Thus, the necessity for the farm to grow seed yearly is eliminated.

Perko

Just 8 to 10 weeks after planting fast-growing perko, with proper cultivation, it yields a harvest of 450 to 500 quintals of green mass per hectare.

It can be grown as a post-mowing, late-summer or winter, intermediate crop. With spring or summer plantings it is possible to mow it 2 or 3 times. Due to its rapid growth it is not smothered by weeds. The green mass contains 2.3 to 2.4 percent crude protein. The output of protein per hectare of such harvests exceeds 11 quintals.

The green mass possesses a high degree of digestibility and is eaten readily by all types of livestock. Fifty to sixty days after planting perko is ready for mowing or grazing. Under conditions of sufficient soil moisture and nutritive elements, it can again be used for grazing after a month.

In producing a high harvest yield, perko requires many nutritive substances. Therefore, it is recommended that for plantings in the spring it receive 90 to 120 kg of nitrogen fertilizers, 60 to 90 of phosphorus and 90 to 120 kg of potassium per hectare.

For post-mowing or late-summer plantings the dosage of nitrogen may be reduced to 60 to 90 kg per hectare. The planting times in the spring are early as for grain crops. Post-mowing and late-summer plantings in July yield approximately twice the harvest of an August planting. Therefore, perko should not be planted later than August 10-15. Particular attention must be devoted during planting in order that the seeds not be planted deeper than 1.5 to 2 cm. Ten kg of germinating seeds are sown per hectare. It is planted in rows.

When growing perko for producing green mass in the spring and for seed, the planting should be carried out not later than the first 10 days of August. The seeding rate is the same as for spring planting. A third of the nitrogen fertilizer is applied before planting and the remainder in the spring as a supplement.

Perko has been grown for a relatively short time in our republic. However, sufficient experience has been acquired somewhere. For several years the sovhoz "Kormyanskiy" in Kormyanskiy Rayon has been growing perko for green mass. They have used the narrow-row method of planting with a seeding rate of 10 kg per hectare. They apply 80 kg of nitrogen fertilizers and 70 kg of phosphorus fertilizers per hectare of planting. The first mowing is in the beginning of August and yields 450 quintals of green mass per hectare. Then supplemental nitrogen fertilizers are applied at the rate of 60 kg per hectare. The second mowing is done early in October and each hectare produces 250 quintals. The total yield for 2 mowings is 700 quintals of green mass per hectare.

Nearly 1,000 hectares were planted in Perko last year in Vitebskaya Oblast, and a sufficiently high harvest yield of green mass was achieved on each hectare. Perko plantings were utilized for ensilage and for pasturing livestock. After pasturing, the plantings were supplemented with mineral fertilizers and they quickly grew out again. This made it possible to produce more than 250 additional quintals of green mass from this valuable feed crop.

White Mustard

White mustard is enjoying deserved success because it is rich in protein, mineral substances and carotene. Moreover, it produces abundant green mass. No less important is the fact that mustard is a cold resistant plant which is capable of growing green mass even at relatively low temperatures. Its seed germinate at a temperature of 1 to 2 degrees above freezing, begins to grow at 3 to 4 degrees above freezing and withstands brief autumn freezes of 8 to 10 degrees below freezing. In addition, it is an early maturing crop. It needs only 35 to 40 days to achieve mowing maturity.

For green supplemental feeding, mustard must be utilized during the beginning of blossoming. At a later period (full blossoming through the beginning of fruit formation), when mustard yields a very large harvest of green mass, it is best used for silage. Mustard is good for silage both alone and with other crops. A highly nutritive grass meal is produced from it.

Soil preparation for mustard in second plantings consists of plowing with harrowing and packing and leveling of the surface.

White mustard grows well in soddy podzolic soils. It does not withstand heavy, clay soils with close standing ground water and with high levels of acidity. It can be grown in dry peat soils.

It reacts well to all types of fertilizers, especially nitgogen. The mineral fertilizer dosages recommended for it are: N--90 to 120, P--60 and K--60 to 80. Organic fertilizer is applied to the preceding crop. Seed planting depth is 2 to 3 cm and when planting in dried out soil it is 4 cm. Seeding in late-summer plantings must be done not later than August 10 in the central area and not later than August 15 in the southern area of the republic. In the northern zone of the republic it is possible to utilize late-summer plantings for livestock pasture.

It is sown, as a rule, in the continuous method using grass seeders at a rate of 25 to 30 kg of seed per hectare.

Mustard is planted early in the spring for seed production, as soon as it is possible to begin field work. It can be planted after various crops. The basic and preplanting soil preparation is not at all different from that for summer crops. The seeding rate for the continuous method is 12 to 15 kg of seed per hectare. The harvest is carried out through direct combining with adjustments made for harvesting perennial grasses.

Turnips

The roots as well as the tops of turnips possess high feed qualities. It is sufficient to say that in 1 quintal of roots there are up to 10 feed units and approximately 1 kg of digestible protein, and in a quintal of the tops there is even more, namely, 11 to 12 feed units and 1.3 to 1.8 kg of protein. An important characteristic of this crop is its early maturing. The length of the growing period, depending is 60 to 10 days. Because of this, it is possible to grow it not only in spring plantings, but alsc in post-mowing and late-summer plantings.

Turnips are less demanding of soil than other root crops. With sufficient applications of organic and mineral fertilizers, high harvest levels of turnips can be obtained both in loamy and sandy loam soils. It even does well in weakly acid soils.

When turnips are planted in normally moistened soil, sprouts appear in 3 to 4 days. It is also significant that turnip seeds begin to germinate at a temperature of 2 to 3 degrees, and the root and leaves withstand frosts of 7 to 8 degrees below freezing. This quality makes it possible to keep the plants in the field until late fall and to obtain higher harvest yields from post-mowing and late-summer plantings.

It is best to plant turnips in crop rotation fields after crops which leave the soil free of weeds, dangerous pests and sources of diseases of mustard family crops. Good crops to precede turnips which are planted in the spring are row crops, grain crops and pulse crops to which organic fertilizers have been applied. For post-mowing plantings, good preceding crops are winter rye for green feed, vetch-oat, pea-oat and lupine-oat mixtures and for late-summer plantings barley, winter rye and early potatoes are good.

Soil preparation for summer post-mowing and late-summer plantings begins immediately after harvesting the preceding crop and consists of plowing, cultivation with harrows and packing.

Turnips are grown primarily in the wide-row method with an inter-row width of 45 to 50 cm. To achieve a normal sprout density, it is necessary to sow 2 to 2.5 kg of seed per hectare. However, in late-summer plantings for green mass it is possible to use interrow or continuous row plantings. The seeding rate in this situation must be raised by 20 to 25 percent.

To combat weeds, the first cultivation and harrowing is done 5 to 6 days after the appearance of full sprouts at a depth of 4 to 5 cm and the second and third after 10 to 12 days at a depth of 6 to 8 cm.

To combat pests and disease, the turnip sprouts are dusted with GkhtsG and trichlorfon and the seeds are treated with granosan, mercuran, TMTD (trimethylthiuram disulfide) or other preparations.

Observing these agrotechnical measures, in light, loamy soil, the experimental farm "Zhodino" in Smolevichskiy Rayon produced a harvest yield in excess of 450 quintals per hectare (roots and leaves) for 4 years.

11220
CSO: 1824

REGIONAL DEVELOPMENT

VAZALINSKAS DISCUSSES IMPORTANT TASKS OF LITHUANIAN FARMERS

Vil'nyus SOVETSKAYA LITVA in Russian 11 Apr 80 pp 3-4

[Report by Deputy V. Vazalinskas, deputy chairman of the Lithuanian SSR Council of Ministers: "Urgent Tasks of Farmers"]

[Text] Comrade deputies!

The workers of socialist agriculture in Soviet Lithuania, implementing the agrarian policy of the party, the tasks put forward by the 25th CPSU Congress and the 17th Congress of the Communist Party of Lithuania and the decisions of the July (1978) and November (1979) Plenums of the CPSU Central Committee, attained quite good results in the increase in production, in the fulfillment of the plans and assignments for the sale of products to the state and in the solution of important organizational, economic and social problems. Although the last 2 years of this five-year plan were especially difficult and slowed down the rates of growth, in 4 years of this five-year plan the average annual volume of gross agricultural output, as compared with the average indicator of the past five-year plan, increased in the public sector by 21 percent, grain production, by 24 percent, milk production, by 18 percent, meat production, by 21 percent and egg production, by 45 percent. Four-year assignments for the sale of grain, potatoes, flax fiber, vegetables, fruits, berries, milk and eggs to the state were fulfilled. The plan for the procurements of sugar beets and the plan with an additional assignment for the sale of meat to the state remained slightly--by 2 percent--unfulfilled.

Although the republic's agriculture has begun the last year of the five-year plan, having basically fulfilled the most important assignments of the past period, the situation in livestock breeding remains complicated and the completion of livestock wintering takes place under great tension. However, a firm resolution to overcome the difficulties and to do the utmost so that the annual assignments and the assignments of the entire five-year plan may be fulfilled successfully is felt everywhere.

The last 2 years have been especially unfavorable for fodder production. This year we had only 72 percent of the fodder necessary for the wintering of livestock, including mixed feed supplied in accordance with the plan and additionally obtained concentrates. On many farms throughout the winter period livestock had to be fed at lowered norms. This had a negative effect on the productivity of livestock and on the production and purchase of livestock products. On kolkhozes, sovkhozes and other state farms in the first quarter of this year, on the average, one cow produced 67 kg milk less than during the same period last year. The weight gain of livestock was lowered and farms sold livestock of smaller weight. On farms of all categories in the first quarter of this year 3 percent less livestock and poultry, 11 percent less milk and 4 percent more eggs were purchased than during the same period last year.

Although the situation in livestock breeding is not easy, major negative changes have not occurred. The stock has been preserved and the level of production and procurements has not been lowered comparatively much. This once again confirms that the republic's socialist agriculture, mobilizing reserves and efficiently utilizing fodder, is capable of overcoming the difficulties that have arisen.

The CPSU Central Committee and the Union government gave considerable help to the republic, having additionally allocated fodder grain, and fraternal republics and oblasts, coarse fodder. Farms helped each other a great deal. The collection of food waste from enterprises and the population also contributed to the replenishment of fodder resources.

The difficulties in the last few years caused by the shortage of fodder taught farm managers and, especially, workers on livestock breeding farms a great deal. The benefit from the preparation of fodder immediately before feeding becomes more and more obvious. More fodder preparing shops and areas are being established on livestock breeding farms and fodder preparation techniques are being mastered better. Recording has improved and control over fodder utilization has intensified.

At the November Plenum of the CPSU Central Committee Comrade L. I. Brezhnev stressed that "... to significantly increase meat production in the country is the first duty of managers of the agricultural sector, local party and Soviet bodies, specialists and all workers in livestock breeding."

We must pay special attention to meat production, not permit its reduction now, but, on the contrary, seek its further significant increase.

At present, ensuring the fulfillment of minimum stock sale schedules, we must preserve the necessary livestock resources in order to fulfill the plans of subsequent quarters and the annual plan. We must do our utmost to increase or, more accurately, to restore the previously attained weight of sold livestock.

Now, when there is a shortage of concentrates, it is advisable to sell more hogs, although they have not reached a large weight, and young cattle should be preserved as much as possible for sale in the second half-year. This will make it possible to bring young stock up to the necessary sale weight, to increase meat production, to improve the fulfillment of sale plans and to obtain a price increment.

Observing these principles, during this wintering period many farms did a great deal not to reduce the number of stock, to preserve all the pedigree livestock and to create the necessary base for an increase in the pedigree stock next year. Therefore, now it is necessary to take measures to rectify the situation. The practice of killing low-weight young cattle for the internal needs of farms or of selling it without justification must be eliminated as soon as possible.

Morbidity and mortality among livestock have a negative effect on meat production. It is necessary to improve the care of livestock and to intensify the use of veterinary preventive and therapeutic measures.

In order to preserve the number of the hog stock in the first half-year and to have as much stock as possible in the second half-year, herd reproduction was reorganized accordingly on farms. It is assumed that the assignments for the production of hoglings in the first half-year will be fulfilled and there will be more of them than last year. It is necessary to see to it that these hoglings are fed with fodder of the new harvest and sold this year.

Farms of the private sector have a considerable share in the production and procurements of meat in the republic. The public sector by means of forward contracts greatly replenishes the resources of fattening livestock from them. There is sufficient livestock in private use. Therefore, the sale plan envisaged for this sector must be fulfilled. However, this year the course of procurements in this sector evokes great concern, because in the first quarter of this year 29 percent less livestock was sold to the state than during the same period last year. It is necessary to see to it that the number of livestock belonging to the population is increased, to ensure the fulfillment of the set assignments for the sale of hoglings and young poultry, to improve the conditions of keeping livestock belonging to the population, to give it more help in provision with pastures and fodder, to improve the purchase of livestock from farms of the private sector in the maximum possible way, creating the most favorable conditions for the sale of livestock to the state, and to stop speculation. It is necessary to see to it that farm managers and village soviets are constantly concerned with the utilization of these reserves.

The shortage of fodder was especially reflected in the course of production and sale of milk to the state. A total of 36,000 tons of milk, or 11 percent less than last year, were bought on farms of all categories in the first quarter of this year. The Ministry of Agriculture, executive committees of rayon soviets and their administrations of agriculture must see to it that the reduction in the indicators of milk production is not justified by the shortage of fodder alone.

A pasture period most favorable for an increase in milk production is approaching. Therefore, it is very important to allocate more fodder for calved and the most productive cows and to see to it that all the cows go out to pastures most fattened. The help with concentrates now given farms makes it possible to do this.

The Ministry of Agriculture, rayon executive committees, their administrations of agriculture and farms should promptly take all measures and rectify the situation in dairy farming.

On April 1 of this year Rokishkskiy, Kapsukskiy, Shakyayskiy, Raseynskiy, Radvilishkskiy, Yurbarkskiy, Kel'meskiy and Mazheykskiy rayons in the public sector had fewer cows than last year. Measures must be taken to rectify this situation. It happens that young and productive cows are discarded without justification.

Owing to a better organization of milk purchase from the population, 9 percent more milk was purchased in 3 months of this year. However, the purchase in this sector was reduced in March. There are no justifications for this. There is more milk on the population's farms. Therefore, we should see to it that such an important reserve is maximally used for an increase in milk purchases. The ministries of meat and dairy industry and of procurements, executive committees of rayon and village soviets and farm managers should pay more attention to this.

Now it is very important to make good preparations for the pasture period. We have all the conditions for a good fertilization of pastures and especially of the areas where the grazing of livestock will begin first. An efficient organization of work during the period of transition and a continuous supply of green fodder, clean water and mineral substances for livestock--these are the factors on which the fulfillment of the plans for milk and meat production and procurements depends.

Important and responsible tasks are to be solved in plant growing this year. It is especially urgent to normalize the situation in grain and fodder production so that neither this year, nor next year livestock wintering begins with such a low provision with fodder as in the last 2 years.

Striving for this goal, we will have to even more persistently introduce a high standard of farming on all farms and to be more concerned with improving the time and quality of land cultivation and sowing, refining the application of fertilizers, accelerating the introduction of crop rotations, breeding the most suitable plant varieties and intensifying the control of weeds and plant diseases and pests. The duty of farms and specialists is to more widely and creatively use the recommendations worked out by scientific institutions and the experience of advanced farms in production.

In order to fulfill the five-year plan for grain production, this year it is necessary to grow no less than 3.2 million tons of grain. To attain this goal, this year, as we committed ourselves in the agreement on socialist competition with Belorussian farmers, we must obtain, on the average, no less than 28 quintals of grain per hectare.

In order to obtain a high harvest, a fairly good basis has been established in all the republic rayons this year. In the fall 481,000 hectares of winter crops were sown, including 446,000 hectares, with grain. On the whole, wintering conditions were favorable for winter crops. For the sowing of spring crops soil was plowed everywhere in the fall and the time and quality of plowing were also not bad. In the fall organic and mineral fertilizers were applied to considerable areas.

On the whole, for spring sowing this year farms in the republic are well provided with seeds of grain crops, which meet sowing quality requirements. Flax and perennial grass seeds have also met the necessary quality requirements. However, a number of farms are not yet fully provided with perennial grass seeds, especially clover, as well as peas, vetch, lupin and other spring pulse crops. The procurement of seeds and purchase of their lacking quantity must be completed in the next few days.

Special attention should be given to the breeding of seeds of grain crops. It is important to see to it that in all rayons and farms seed plots are sown only with treated seeds of high-quality regionalized varieties. It is necessary to take the most efficient measures to improve the breeding of seeds of pod bearing crops—vetch, peas, beans and lupin—and to obtain the maximum quantity of their seeds. This is most important for the solution of the problem of increasing the content of protein in fodder.

The repair of equipment has been completed in most rayons. A total of 97 percent of the tractors and 99 percent of the cultivators and seeders have been prepared for spring field operations. The State Committee for Supply of Production Equipment for Agriculture must take every measure so that at the beginning of spring field operations an exchange stock of machines and units is created and the problem of providing farms with spare parts and petroleum products is solved efficiently.

The rayons and farms that now once again check the preparation of tractors, motor vehicles and soil cultivating and sowing equipment for operation act correctly. It is necessary to specify whether sowing schedule plans, especially the distribution of the operation of mechanized links, meet the existing capabilities. All high-power 1-150K and K-700 tractors should be provided with soil cultivating and sowing wide-cut units. Technical service links provided with means of transportation, welding units, tools and spare parts and materials most necessary for repairs should be established on every farm.

It is very important for farms to be promptly provided with petroleum products and to use them efficiently.

The provision of farms with machine operators is greatly reflected in the rates of field operations. To compensate for the shortage of machine operators, during the spring sowing campaign it is first of all necessary to utilize all the personnel reserves on farms and, if needed, to call tractor operators of patron organizations for help. It is necessary to ensure good conditions of work, rest and nutrition for machine operators and all participants in the sowing campaign.

The success of sowing operations largely depends on how the drawn up plans and schedules for land cultivation, application of fertilizers and sowing are fulfilled on farms and how efficiently they are adjusted if the weather or other important factors introduce unexpected corrections. It is very important for farm managers and specialists to do this thoughtfully and efficiently, without lowering the rates of field operations and without detriment to the quality of operations. The introduction of advanced technology, advanced forms of labor organization and the most refined methods of overall utilization of equipment and the maximum utilization of the technical capabilities of machines should contribute to successful work.

Our capabilities and shortcomings in the cultivation of commodity crops--potatoes, vegetables, flax and sugar beets--and in the fulfillment of the plans for their procurements have been disclosed in the last few years. The farms that specialize in the cultivation of these crops should be better provided with means of mechanization and help should be given them in recruiting personnel and in establishing permanent mechanized links.

Utilizing the accumulated experience, this year it is necessary to continue to improve the cultivation of potatoes and to increase their yield. Now all potato seeds must be well prepared for mechanized planting. It is especially important to plant potatoes early in straight and full rows without empty spaces and to ensure their good care throughout the vegetative period. It is necessary right now to make good preparations for mechanized potato digging, utilizing combines as best as possible.

This year it is necessary to continue the specialization of the cultivation of commodity potatoes and to increase the responsibility of specialized farms for the fulfillment of the plans for the sale of potatoes to the state and for the quality of products supplied to consumers. Potatoes can and should become a productive and profitable crop everywhere.

Last year the results of cultivation and procurements of sugar beets were not bad. However, some rayons nevertheless did not fulfill the plans for the sale of sugar beets to the state. The low yield of sugar beets was the main reason. Agrotechnical requirements are still not met in many places.

In 1976-1977, years unfavorable for sugar beets, a low harvest was grown in the republic and the debts to the state totaled 108,000 tons of sugar beets. In the last 2 years rayons and farms partially covered these debts. However, we entered the fifth year of the 10th Five-Year Plan, still having debts of 52,000 tons. In order to liquidate them this year, we must obtain more than 820,000 tons of gross harvest.

Nor was last year favorable for flax growing. The end result was low—3.2 quintals of flax fiber per hectare and a low quality of output. Much more attention should be given to flax growing.

All the attention of farmers should now be directed toward the best implementation of spring sowing. For this it is necessary to utilize all the capabilities, all the reserves and all the advantages of our large-scale, technically well-equipped agriculture.

Farms in the republic do a great deal to strengthen the fodder base. The structure of fodder crops is improving and their yield is growing, although not on such a scale as one would wish. Small areas of natural meadows and pastures are drained and cultivated every year.

In accordance with the decree of the July (1978) Plenum of the CPSU Central Committee and the decree of the CPSU Central Committee and the USSR Council of Ministers "On Additional Measures To Increase the Production of Coarse and Succulent Fodder in 1980 and To Improve Its Quality," the appropriate decree, which confirms the assignments for the production of hay, haylage, silage, grass meal and chop and fodder crop roots for 1979-1985 and outlines measures to ensure the reserves of this food and its good quality, was adopted in the republic.

The Ministry of Agriculture, executive committees of rayon soviets and their administrations of agriculture must improve the work on the further search for additional potentials for increasing grain and fodder production. On every farm it is necessary to analyze the existing situation and to refine the overall plans of measures ensuring an increase in the production of grain and fodder and an improvement in their quality this year and for the entire period of 1980-1985.

This year the republic's farmers will have to prepare 1.350 million tons of hay, 1 million tons of haylage, 300,000 tons of grass meal and chop, 4 million tons of silage and 2 million tons of root crops. For the 1980-1981 wintering period, on the average, no less than 20 quintals of fodder units of coarse and succulent fodder should be prepared per standard head of cattle.

About 1 million hectares of arable land have been allocated for fodder crops in the republic and the possibilities of expanding these areas are very limited. Therefore, it is necessary to increase the yield of these crops, but on many farms it is still low.

The yield of perennial grass is still low. Such a situation cannot be tolerated. Perennial grass areas must be correctly sown and well fertilized and the harvest of perennial grass must be gathered promptly and without losses in order to obtain at least 50 to 60 quintals of hay per hectare on all farms.

The yield of annual and silage mixtures is low. This happened, because less cultivated soil was reserved for these mixtures. Moreover, it was not fertilized sufficiently and was sown last and the crops had many weeds. Finally, there was a great deal of disorder in the recording of their harvest.

Attention to the fulfillment of hay production plans must be increased considerably. On the average, in the last 4 years of the five-year plan in the republic the hay preparation plan was fulfilled only 86 percent. This year on farms work on hay preparation should be planned so that as much hay as possible is produced and not only general plans, but, what is very important, plans for hay production for collective livestock are fulfilled. Hay reserves must also be created without fail.

This year we must see to it that every rayon and farm fulfill the assignments for haylage production. For its production it is necessary to make up a full set of the necessary equipment, to organize its cooperation, to see to it that quality haylage is prepared on every farm and to improve the utilization of haylage towers.

To improve the quality of all types of fodder is a very important task. Therefore, it is necessary to strictly control the observance of the technology established by science, the rates of introduction of the most advanced methods of preparing grass fodder and the expansion of the production of grass meal and chop and to see to it that more hay is pressed and dried by means of active ventilation.

Much attention should be given to the utilization of units for grass meal production.

The republic's farms have 709,000 hectares of cultivated pastures and meadows. The summer output of livestock breeding and the accumulation of grass fodder for winter largely depend on how they are utilized. Therefore, it is very important to cake care of such areas correctly, to fertilize them well and to use them in accordance with all agrotechnical requirements.

In the republic there are 0.46 hectares of cultivated pastures per standard head of cattle. Last year 2,880 fodder units per hectare were obtained. Where cultivated pastures are taken care of, fertilized and used correctly, harvests are much greater. Last year farms in Prenayskiy, Kedaynskiy, Shyaulyayskiy, Anikshchyayskiy and Shakyayskiy rayons obtained 3,540 to 3,920 fodder units per hectare. However, on farms in Akmyanskiy, Shal'chininkskiy, Trakayskiy, Plungeskiy, Tauragskiy, Utenskiy and Tel'shyayskiy rayons the yield of cultivated pastures totaled only 1,600 to 2,200 fodder units per hectare.

The areas of cultivated meadows in the republic occupy 184,000 hectares. Farms that take care of these meadows correctly obtain a great deal of good fodder from them. This year everything should be done so that on every farm, owing to the introduction of scientific recommendations and the experience of advanced farms, the use of cultivated meadows and pastures is improved considerably and no less than 3,000 to 3,500 fodder units per hectare are obtained.

For the republic's farms reclamation specialists established 17,000 hectares of irrigated cultivated meadows and pastures. In the hands of good managers such green land is vast wealth bringing a rich harvest under any weather conditions. However, there are farms where these areas are not utilized intensively, at times are not even watered, are fertilized poorly and do not give the expected yield.

Silage production is to be increased this year. For the purpose of a big accumulation of the reserves of this valuable and high-quality fodder advanced farms prepare silage at three stages during the season. This enables them to more evenly utilize equipment and manpower. It is necessary to see to it that this year silage is prepared in such a way on every farm.

This year we must improve the growing of fodder root crops considerably. Thus far the plans for the preparation of this fodder have been fulfilled most inefficiently. More concern for an increase in the yield of fodder root crops, improvement in the quality of sowing operations, care of crops and mechanization of their cultivation should be manifested. It is necessary to see to it that fodder root crops and their tops are processed promptly and without losses and that the plans for their preparation are fulfilled completely.

This year, taking the state of winter crops into consideration, it can be calculated that there will be more straw. Therefore, it is necessary to see to it that on every farm all of it is well harvested and preserved for fodder for livestock and that its reserve is created.

To replenish fodder reserves, it is necessary to correctly utilize the tops of sugar beets, fodder root crops and vegetables, as well as the food waste of the industry and the urban population.

Nor is the hay harvest far off. Right now it is necessary to draw up detailed fodder preparation plans. On every farm, with due regard for the areas of natural and sown grass and other fodder crops, as well as for what type and amount of harvesting equipment is available, it is necessary to establish mechanized complexes and detachments for fodder preparation. Widely utilizing advanced fodder preparation techniques, it is necessary to complete the harvesting of first-cut grass on every farm no later than July 1. It is necessary to constantly control the course of preparation and quality of fodder and to efficiently eliminate the shortcomings encountered at this section of work.

The Ministry of Agriculture should review the existing and develop additional measures for moral and material incentives for agricultural workers for the fulfillment of the plans for fodder preparation, measures increasing the responsibility of farm managers and specialists for the results of work in this area.

Comrade deputies! Soviet bodies together with agricultural institutions, farm managers, specialists and all farmers under the leadership of party organizations this year will have to do a great deal of persistent work to overcome the existing difficulties, to eliminate the encountered shortcomings and to ensure the envisaged increase in agricultural production. It is necessary to continue to increase the role and responsibility of local soviets of people's deputies, their executive committees, permanent commissions on agriculture and deputies in the fulfillment of state plans, strengthening of production discipline and development of socialist competition among the republic's farms and with farmers in fraternal Belorussia. For the solution of this year's crucial problems the soviets of people's deputies in the localities jointly with farm collectives will have to do everything so that the negative consequences of the last 2 years unfavorable for agriculture are overcome finally. The good results of this year will become a firm base for the fulfillment of the tasks of the approaching 11th Five-Year Plan and the republic's weighty contribution to an appropriate welcome for the 26th CPSU Congress.

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AGRO-ECONOMICS AND ORGANIZATION

IMPORTANCE OF HORSES IN NORTHERN RSFSR STRESSED

Moscow IZVESTIYA in Russian 28 Mar 80 p 2

[Article by A. Polezhayev, director of the Politotdelets Sovkhoz, Vologodskaya Oblast: "One Horsepower"]

[Text] I recently witnessed the following scene. A very unattractive horse was harnessed to a sleigh and standing at the edge of a forest settlement. It was surrounded by a group of youngsters who pressed hard against each other in an effort to obtain a better view.

Meanwhile, off in the distance the smart looking Zhiguli and Moskvich vehicles sparkled as they rushed along the concrete highway and one could hear the rumbling of the powerful KamAZ trucks, the hoods of which concealed tens and hundreds of horsepower. But the children displayed no interest in the motor vehicles: both the youth and the adults as well are accustomed to seeing the machines. These mechanical forces are accepted today as being nothing more than the consequence of industrial development throughout the country and even throughout the world. Gasoline is poured into the tank and the ignition key turned -- and thereafter one can drive to his heart's content over the asphalt.

Yes, over the asphalt... But an automobile does not move as friskily along a country road. The Zhiguli vehicles must be towed over a forest road during the season of bad roads. One must transfer to a Uazik or Niva, which have 4-wheel drives. But more often than not a tractor is required. Nor is a K-700 able to pass through in all areas, or especially along our forest side.

At the same time, ordinary horses (we do not have elite ones, only village horses) are able to reach a distant brigade camp, somewhere beyond a lake and near a swamp or small village, to which point asphalt roads still do not reach, nor are they expected to in the near future. And the horses deliver various items to this point: milk, goods required for a store, latest newspapers, magazines, television expert or an inspector for a domestic services combine.

Certainly, a helicopter could be rented: it is said that we are now rich and that the farms have much money in their accounts. But is it wise to employ hundreds of horsepower there when one will suffice, a horsepower which was created by nature and which is reliable and thrifty?

Mention should be made concerning the economic aspects of the problem. At the present time, the possibility of replacing the principal tractive machines in agriculture with horses is unthinkable.

Nevertheless, horses are still necessary. Take our sovkhoz for example -- 3,000 head of cattle and only 60 horses. The horses consume 2 percent of the feed supplies. Yet, great use is obtained from the. Each summer we saddle up 35 shepherds. This means that the herds are becoming more mobile, the pastures are being used more completely and they are being trampled down to a lesser degree and in the final analysis the cattle are producing noticeably greater quantities of milk and meat. In the winter the horses participate in the work of hauling farmyard manure out onto the fields, procuring firewood and transporting feed to the farms during the season of bad roads. They are of great help to our 92 tractors and 48 motor vehicles. Even more important is the fact that although they do not substitute for the equipment used in the principal operations, nevertheless the horses are irreplaceable in those areas where neither wheels nor caterpillar tracks can pass.

And if we are discussing feed, then is it not true that for every 10 times that he swings his scythe, a shepherd presents an armful of fresh grass to his horse? Or a small stack of hay during the winter. And the youth and admirers of nighttime activities find quite a bit. It is a type of enchantment -- to sit before a camp fire of a summer evening?

There are many farms in our almost inaccessible Vologodskaya Oblast on which the roads are considerably worse than is the case at our suburban sovkhoz. The roads of our neighbors -- Arkhangel'skaya Oblast and the Komi ASSR -- are even more complicated. Yes and is there anybody who would maintain that the roads in the nonchernozem zone are exceptional? It would seem also that there should be a greater number of horses and yet this unfortunately is not the case. The number of horses is decreasing with each passing year. For some reason, the planning organs are not paying attention to this fact. The leaders of many farms have lost interest in their horses. The quality of the zootechnical work has fallen. And although 80 calves are being obtained annually from every 100 cows in the oblast, only 17 colts are being foaled from 100 mares. Moreover, the figures are even lower on many farms.

By no means do all of the young agronomists and zootechnicians venture forth on horseback. Rather, they request the use of a heavy-duty motorcycle or a cross-country vehicle. One can easily understand why. It is recalled that not too long ago the animal husbandry faculties at agricultural VUZ's and technical schools conducted a special examination on the breeding of horses and they gave instructions on the harnessing of horses. Such an examination is no longer being given. Moreover, the possibility for doing so is limited anymore. Moreover, the situation in agriculture with regard to the availability of harnessing gear, sledges and wagons is critical. The experienced harness and saddle makers have grown old and no new ones are undergoing training at any of the rural professional-technical schools. And there are few who are aware as to which works should be fitted out with equipment. For example, there is our smart Vologda troika, used for driving guests to the VDNKh [Exhibition of Achievements of the National Economy of the USSR].

Today only a few horses are to be found on the private plots. A limitation which was imposed long ago still prevails in this regard. And the question is often asked as to why rural residents are not permitted to acquire a horse, or at least a colt, a practice which is permitted in Kazakhstan and in the central Asian republics. There would be those who would relish the idea of maintaining a horse on their private plots, together with a cow and poultry.

I held discussions with others. Although not everyone, nevertheless there were many who maintained horses. At least they said they did.

And there are many advantages to doing so: plowing one's own private plot and cooperating with and assisting a neighbor. To transport farmyard manure for fertilization purposes and firewood from the forest. Indeed, they are already adapting motorcycles for carrying out this work on the private plots.

Understandably, it will be necessary to organize the long-forgotten production of horse-drawn plows (today it is impossible to find them anywhere), light-weight harrows, cultivators and wagons.

One horsepower. Its importance is considerably greater than I have outlined it in this article. It was by no means an accident that my story began with school children clustering around an ordinary rural horse. This century, characterized as it is by equipment, tends to limit the opportunities for communicating with live nature. Yet this is very necessary for man.

At the Cherepovets Hippodrome, which is located along the border of our sovkhoz, a children's-youth sports section has been created. There is no end to the number of individuals wishing to participate in the work of this section. The strict trainers are accepting only the most diligent individuals, those who have faultless school records. Yet how many adult spectators gather at the hippodrome on a day that trotting races are scheduled to take place? A festive spirit flourishes in one's heart upon seeing a trotting horse, a smart looking troika or, certainly, an ordinary country horse.

Thus, it is still too early to relegate to the archives this ancient friend of man -- the horse, which has traveled a long road with him, from ancient times to the heights of civilization. In all aspects, the horse is still quite useful.

Thus, let us ponder together the best methods for raising horse-breeding to a new level throughout the country and increasing the efficiency factor for one live horsepower.

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UNDERPAYMENT FOR PRIVATELY OWNED CALVES

Moscow TRUD in Russian 5 Dec 79 p 2

[Letter from Bushuyev, Shekovets and other kolkhozniks, Prokhorovskiy Rayon, Belgorodskaya Oblast]

[Text] This past summer the chairman at our kolkhoz "Krasnoye Znamya" came to us, the kolkhozniks, with a request to sell our surplus calves to the kolkhoz for fattenning. He named a price--one ruble 50 kopeks per kilogram of live weight. The head animal specialist accepted the cattle and he too confirmed the chairman's word: They would pay a ruble and a half per kilogram.

We sold 12 calves. But the accounting showed that they payed us another price--one ruble 37 kopeks per kilogram.

The kolkhoz chairman declared that this is the price set by a resolution of the Prokhorovskiy rayispolkom and rayon board of agriculture.

Why was it necessary to name the original price? It seems like our kolkhoz leaders merely deceived us.

CSO: 1824

AGRO-ECONOMICS AND ORGANIZATION

BRIEFS

SUITABILITY OF OLDER IMPLEMENTS--Lempikha, Permskaya Oblast--It would seem inappropriate at this time to even mention horse-drawn mowers, scythes and sickles. However, in some instances they are still suitable for use at kolkhozes and sovkhozes. For example, let us assume that grain crops have lodged on certain tracts. Although a combine can do nothing, a horse-drawn mower could harvest the tracts. And on small distant fields and meadows, where considerable difficulty would be encountered in attempting to deliver the usual equipment, these implements could prove to be very suitable. Unfortunately, very few farms have these implements at their disposal and very few horses remain in the villages. Yet this represents a reserve which would be of great assistance in reducing losses. [Text] [Moscow TRUD in Russian 3 Apr 80 p 2] 7026

HORSESHOES REQUIRED--Irbitskiy Rayon, Sverdlovskaya Oblast--A business trip which I made to Irbitskiy Rayon left me feeling somewhat depressed. I still recall a rather sad picture: a woman was attempting to raise a horse which was lying on a road. She was having no success. She glanced at the sledge containing bags of flour. The 1st Brigade of the Kolkhoz imeni Chapayev was waiting for the flour to be delivered. What was to be done? We left our vehicle and furnished assistance in freeing the horse from its harnessing. It stood up with difficulty and thereafter cautiously, in the manner of a child learning how to walk, it began moving towards a cuvette. Along the way we visited the central farmstead of the Kolkhoz imeni Chapayev and its chairman, Aleksandr Nikolayevich Rybukhin. We related the incident to him. He merely sighed sadly in response. It turns out that his kolkhoz is not the only one affected by such incidents. The problem has to do with the horseshoes and nails. The neighboring farms are also unable to procure horseshoes. Thus the animals are tormented and the farms suffer. Although the modern equipment is wonderful, horses are still required in the rural areas. Thus the farms must be supplied with horseshoes and nails and good high quality harnessing gear must be produced. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Mar 80 p 3] 7026

LOANS FOR GREENHOUSE CONSTRUCTION--In the 4 January issue of the newspaper SEL'SKAYA ZHIZN' for this year and in the article entitled "Development of

Collective Horticulture and Gardening," it was pointed out that loans should be issued to the members of horticultural associations for the building of greenhouses. A question has been sent in by S. Gavrilov of Kiev -- to whom and in what manner are such loans issued? Credit for acquiring or building greenhouses or for improving gardening plots is extended to manual workers and office employees -- members of horticultural associations (cooperatives). The credit is issued in amounts up to 1,000 rubles, with repayment to be made over a period of 5 years, commencing with the month following the month in which the construction (assembly) of the greenhouses was completed or work associated with improving a plot was completed. An interest rate of 2 percent annually is charged for loans issued for the purpose of procuring or building greenhouses or for improving gardening plots. In the case of overdue loans, an interest rate of 3 percent annually is charged for the period that the loan is overdue. Credit is extended to the manual and office workers of economic accountability enterprises and organizations through these enterprises and organizations and to the manual and office workers of budgetary organizations -- directly by USSR Gosbank institutions, on the basis of petitions from the budgetary organizations. The issuing of loans for procuring or building greenhouses and for improving gardening plots is carried out in the amounts called for in the plans of USSR Gosbank, in accordance with the program for issuing long term credit to the rural population and migrants for the appropriate year. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 3 Apr 79 p 4] 7026

REQUIREMENT FOR MANUAL HAY CUTTER--Barabinsk, Novosibirskaya Oblast--At the present time, the private plots and collective horticulture continue to undergo further development. Thus the problem concerned with the mass production of diverse types of implements, for use by those who work their own plots during their free time, has become particularly acute. Let us take mowing for example. In Siberia we have excellent grasses growing among undergrowth and on unsuitable land. And it is in these areas that the equipment cannot be employed. A manual hay cutter similar to the manual saw should ideally be used for carrying out this work. I have read that the designers have created just such an instrument. But the mass production has still not been organized. Indeed, such a hay cutter should be procured by each individual having a private plot or garden plot to tend. [Text] [Moscow TRUD in Russian 1 Mar 80 p 2] 7026

ASSISTANCE FOR SUBSIDIARY FARMS--A report has been published in the newspapers concerning the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Subsidiary Farms of Enterprises, Organizations and Institutes." What measures, in the form of assistance or cooperation, are planned for such subsidiary farms? Such was the question sent in by V. Sokolkov in Smolenskaya Oblast. In the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Subsidiary Farms of Enterprises, Organizations and Institutes," emphasis was placed upon the importance being attached to developing the subsidiary agricultural production of industrial, transport and other enterprises, organizations and institutes and increasing their production of vegetable, orchard and livestock products, in the interest of improving public catering for the manual and office workers. The proposal has been made to have the party and soviet organs and the ministries and departments carry out the measures required for further developing these farms. The councils of ministers of the union republics, the USSR Ministry of Agriculture and the USSR Ministry of Procurements have been tasked with undertaking measures aimed at ensuring that the subsidiary farms of enterprises, organizations and institutes are supplied with high quality seed, planting stock and young cattle stock. In addition, they must ensure that improvements are carried out in the veterinary and other services associated with agricultural production. USSR Goskomsel'khoztekhnika and the councils of ministers of the union republics are responsible for ensuring that the subsidiary farms of enterprises, organizations and institutes, regardless of their departmental subordination, are supplied with agricultural machines, equipment and spare parts, to the same degree as for kolkhozes and sovkhozes. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 3 Apr 80 p 4] 7026

STIMULATING INTEREST IN WORKERS--Tula--Quite often I was called upon to go to a farm and assist in the harvesting of potatoes. This usually took place in the following manner. Our autobus departed the plant about 0900 hours and we traveled for 2 hours. Subsequently, we would spend a considerable amount of time searching for the brigade leader or manager and thereafter we would dine. About 2 or 3 in the afternoon, we would depart for home. The city-dwellers did not work willingly out on the fields; they merely appeared for the prescribed amount of time. And regardless of how many hectares they harvested, large quantities of potatoes would remain out in the fields after they were finished. Nor were these patrons disturbed -- the plant would not hold them responsible for their negligence. Thus, one third of the crop still remained out on the fields following such assistance. Earlier, we in Tul'skaya Oblast were visited by inhabitants of more southern regions, where potatoes do not thrive very well. For providing us with assistance in carrying out the harvest work, we issued them an agreed upon amount of the crop. After they had finished their work on a field, not one tuber could be found thereon. Perhaps it makes sense for the patron-enterprises to conclude similar agreements with the farms. [Text] [Moscow TRUD in Russian 31 Oct 79 p 2] 7026

ADDITIONAL WORK INCENTIVES REQUIRED--Krivoy Rog--During the summer, many Krivoy Rog pensioners and housewives tend the melon crops at suburban sovkhozes. Such work is profitable both for the sovkhozes and for us temporary workers. We willingly perform weed-control work and harvest the vegetables and still there is a shortage of workers on the farms. This derives from the fact that on the farms and particularly at the Gornyak Sovkhoz, where I usually work during the summer, neither attention nor respect is shown for the personnel. For example, if the administration had concluded work agreements with the temporary workers which assured them of transportation to their working areas and also proper organization of meals, then in all probability many pensioners would have appeared for work at the sovkhozes. [Text] [Moscow TRUD in Russian 20 Nov 79 p 2] 7026

LIVESTOCK FACILITIES REQUIRED--Arbuzinskiy Rayon, Nikolayevskaya Oblast--We live in a rural area, at Kavuna Station in Arbuzinskiy Rayon, Nikolayevskaya Oblast. A new 16-apartment dwelling was built for us using the resources of the Arbuzinka Sel'khoztekhnika. Certainly, we were happy to resettle into it. But here is what disturbed us. Barns should have been placed in the vicinity of the dwelling for the subsidiary farm. We cannot manage without such barns. The administration of the enterprise promised to build the barns during the second half of 1979. However, February of this new year is almost half over and such construction work has yet to commence. How is it possible for us to develop our private plots if we have no facilities in which to maintain our young pigs and chickens? [Text] [Moscow TRUD in Russian 13 Feb 80 p 2] 7026

COLLECTIVE HORTICULTURE AND GARDENING--Shakhty, Rostovskaya Oblast--The importance being attached to developing collective horticulture and gardening throughout the country is well known. Thus, assistance must be furnished to the horticultural associations. Unfortunately, the director of the Shakhty Repair-Mechanical Plant of the Rostovugol' Association, Comrade Gordiyenko, and the professional trade union of the enterprise hold to still another opinion. We have on many occasions requested that water and electricity be supplied to the collective plant orchard and that the road leading to it be maintained in the proper manner. However, no attention has been given to our requests. [Text] [Moscow TRUD in Russian 13 Feb 80 p 2] 7026

SCYTHES AND SICKLES NEEDED--Krasnodarskiy Kray--In traveling over the fields in Krasnodarskiy Kray and moving along the high roads and country roads, one cannot help but take note of the panels and pictures bearing the following inscriptions: "Weeds are the enemies of the fields and gardens. Destroy them!", "Weeds -- remove them from the fields!" Or: "Cut down the weeds surrounding your farmsteads!" Although these are fine appeals, they say very little. We are all aware of the harm caused by weeds, but what can be used for destroying them? Some individuals have scythes and sickles which are worn out, others have broken implements and still a third group, especially young people, have never had either scythes or sickles. And where can they be purchased if in fact they have already become museum pieces in the Kuban'? We are writing about this matter ahead of time, during the period of frosts, in the hope that by summertime the cooperators will have furnished some assistance in this regard. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 2 Feb 80 p 2] 7026

CSO: 1824

OVERSEEDING THINNED WINTER CROPS

Kiev SIL'S'KI VISTI in Ukrainian 6 Apr 80 p 1

/Article by I. Nechyporenko, candidate of economic sciences, assistant professor Poltava Agricultural Institute on: "Ways of Overseeding Winter Crops"/

/Text/ Winter wheat is a leading grain crop in our republic. Sometimes because of unfavorable wintering conditions, its thinned stands have to be overseeded. Farm specialists should determine accurately which winter crops should be overseeded or resown.

To achieve high quality overseeding of thinned wheat, its biological features must be considered as well as the phases and stage of its development, and also of the crop being used for overseeding. This agricultural measure must be accomplished within two to three days in the beginning of spring field work, the seed must be covered within a specific depth without plant injury.

Workers at the Department of Agricultural Machinery of the Poltava Order of Red Banner of Labor Agricultural Institute suggested a special wedge plowshare for the seed drill SZS-2,1 to be used in overseeding thinned crops. The Kryukov car building plant manufactured almost 4,500 of these working parts during the last three years, they are used successfully on oblast farms. This year 3,000 more of these improved plowshares will be manufactured.

Research and production experience showed that during seed covering to a depth of five-six cm in overseeding perennial grasses with seed drills SZS-2,1 with wedge plowshares, five to seven percent of the plants are cut, and in overseeding tillered wheat seven to ten percent. There was no visible plant injury through soil covering. But in poorly tillered winter crops sometimes twenty-thirty percent of plants die as a result of cutting and soil covering.

To avoid such undesirable effects, last year in the practice research farm of our "Yuvileynyy" Institute a narrowed wedge plowshare (on seed drill SZ-3,6) was tested in production. Its width is 16 mm (instead of the 25 mm on seed drill SZS-2,1). This improved equipment did not become clogged with seed, soil or roots during operation. It entered the soil at a depth of 5.5 cm, the rod springs were narrowed additionally for this purpose. Speed of unit movement amounted to 5.3 km per hour. Considerably fewer plants were covered with soil using this method than when wider plowshares were used. Two hundred and fifty hectares of wheat were overseeded this way where plants had died in depressions. A commission consisting of specialists from the practice-research farm and from the institute recommended these plowshares for overseeding winter crops. This year it is expected that the Kryukov car building plant will manufacture 300 narrowed wedge plowshares for the SZS-2,1 seed drill to be used in a wide production review.

For soil levelling after overseeding perennial grasses and tillered winter crops medium or light tooth harrows are used. Over insufficiently tillered wheat crops, where the tillering node is at a depth of 1.5 to 2 cm from soil surface (and sometimes even shallower) chain drag-harrows are used. Heavy chains (steel link diameter 10-12 mm) are hung at a height of 0.6-0.8 meters from soil surface on bars 1-1.2 meters in length attached to seed drill sides. Later the chain is also fastened to the seed drill with wire in several places.

In order to have as few plants (especially those which are poorly tillered) cut and covered with soil as possible, unit movement speed must be four-five km per hour.

Barley sowing norm during overseeding is somewhat higher than calculated. The degree and type of thinning must be considered (uniform or patchy), also anticipated cutting and plant soil covering, and the normal shattering during wheat spring vegetation renewal (especially when it is late). Specialists are primarily concerned with saving prior to harvesting at least 500-600 productive stems of both crops on each square meter.

Success in winter crop overseeding is also dependent on the depth of seed soil covering. On structural chernozem areas in the unstable moistening zone barley is covered to a depth of five-six cm, and on unstructured heavy flood areas in the sufficient moisture zones to a depth of three-four cm.

Last year using seed drills SZS-2,1 with wedge plowshares for overseeding winter crops many farms in the Poltava region harvested more grain from a considerable area than from fields where wheat was not overseeded or resown. At the kolkhoz imeni Makarenko in Poltavskyy Rayon, especially, harvest increase amounted to 7.3 and more quintals per hectare. Quite a lot of additional grain was obtained from overseeding winter crops by the kolkhozes imeni Illich, Khorol'skyy Rayon, imeni Shevchenko, Mashivs'kyy Rayon and others.

Our research and production experience on a number of farms in the Poltavskaya and other oblasts of the republic has shown that stubble seed drills SZS-2,1 with wedge plowshares should be used for overseeding tillered winter crops and perennial grasses. Because of its fairly narrow working reach (2.1 meters) this seed drill is useful for overseeding wheat in depressions. Its plowshares cover the seed to a depth of five to seven cm.

9443
CSO: 1811

SUGGESTIONS FOR SPRING FIELD WORK IN UKRAINE REPORTED

Kiev SIL'S'KI VISTI in Ukrainian 24 Apr 80 p 1

/Ukrainian SSR Ministry of Agriculture and Ukr SSR Ministry of State Farms on: "Quick and High Quality Sowing"/

/Text/ The republic's rural workers are putting much effort and political zeal into fulfilling the decisions of the November (1979) CC CPSU Plenum and December (1979) CC Plenum of the Ukrainian Communist Party. They hope to mark the concluding year of the 10th Five-Year Plan, a year of active preparation for the 26th CPSU Congress, Lenin's anniversary year with a further increase in grain, sugar beet, sunflower and other production.

The most important stage in achieving a good harvest is the successful accomplishment of spring field work. Reviewing specific conditions in various areas, the Ukr SSR Ministry of Agriculture and the Ukr SSR Ministry of State Farms noted that a lot of field work has to be done at the same time this spring: Sugar beets, sunflowers and early vegetable crops are being sown, potatoes are planted. It these conditions it is important to utilize each fair hour most effectively.

A check up indicated that on most farms technology is used very productively, field work has been clearly organized based on group unit utilization for a full twenty-four hour period. Special approval must be given to the experience of those kolkhozes and sovkhozes where, based on concrete weather conditions, wide reach units and production process combinations are utilized.

Early grain crops have already been sown on farms in Krymskaya, Odesskaya, Khersonskaya, Zaporozhskaya Oblasts. At the kolkhoz "Rosiya", Dzhankoyskyy Rayon, Krymskaya Oblast, in particular, early spike crops were sown in two working days with simultaneous mineral fertilizer application. Kolkhozes imeni Michurin, imeni Shevchenko, imeni Dzerzhyns'kyy, "Bil'shovyk", "Svitlyy Shlyakh" in the Bilgorod-Dnistrovskyy Rayon, Odesskaya Oblast, accomplished their work in one and a half to two working days.

During the all-union communist subotnik /free overtime work/ in honor of the 110th anniversary of V.I. Lenin's birth, A. O. Yatsenko, tractor operator at the sovkhoz "Chervonyy Perekop", Kakhovskyy Rayon, Khersonskaya Oblast, using a tractor T-150 with three seed drills sowed 80 hectares of peas in one day compared to a norm of 46; at the kolkhoz imeni Paryz'ka Komuna, Novotroyits'kyy Rayon, in the same oblast, six sowing units sowed 420 hectares of grain crops.

Yet, the check up indicated substantial shortcomings in the conduct of field work on a number of kolkhozes and sovkhozes. Farms in the Kominternivs'kyy and Tarutyns'kyy Rayons, Odesskaya Oblast are beginning field work too slowly. At the kolkhoz imeni Michurin, Kominterns'kyy Rayon, for example, because of poor presowing soil preparation, inadequate soil seed covering was allowed, almost a third of it remained on the surface. A similar situation occurred at the kolkhoz "Druzhba", Nyzhnyohirs'kyy Rayon, Krymskaya Oblast. On farms in the Chaplyns'kyy Rayon, Khersonskaya Oblast, all sowing units were not equipped for a night shift.

This year areas for raising corn, sunflowers, soybeans, sugar beets and several other crops according to the most recent technology are being markedly expanded. Along with use of highly effective herbicides, application of the needed amount of fertilizer to the soil is essential for these technologies. However, adequate attention has not been paid everywhere to this matter.

The vegetable fields require a lot of work now. This work is well organized on farms in the Donetskaya, Odesskaya, Krymskaya and Zakarpatskaya Oblasts where early cabbage planting is now being concluded. In areas where machines cannot be used planting is done by hand. In these oblasts onions, carrots, radishes and other early sowing vegetable crops are sown quickly.. However, in the Nikolaevskaya, Dnepropetrovskaya, Kirovogradskaya, Poltavskaya, Cherkasskaya, Zaporozhskaya and other oblasts timely sowing dates for early cabbage and other vegetable crops are neglected.

In many oblasts a delay in planting potatoes is allowed because of unsatisfactory organization of sorting and seed material preparation. Up to now, only a third of it has been sorted and prepared, only a fifth of the tubers have been assigned for warming and sprouting. This work is especially slow in Ternopolskaya, Lvovskaya and Zhytomirskaya Oblasts.

The Ukr SSR Ministry of Agriculture and the Ukr SSR Ministry of State Farms have requested that oblast and rayon administrations and sovkhoz trusts take all necessary steps to make sure that within the next few days early grain and grain-pulse crops are sown, as well as perennial grasses, mixtures and other crops which should be sown now, and that the soil should be well prepared for sunflowers, corn, soybeans and other later crops.

Considering a possible quick temperature rise, all measures towards moisture conservation and its productive use should be accomplished, also measures towards creative application of soil working methods, production line work and optimal seed covering depth. In connection with the introduction of new technologies, in which optimal plant density is determined by the amount of high quality seed sown, particular attention should be paid to the establishment of a correct sowing norm for corn, sunflowers, soybeans and other crops. A proper agrotechnological level must be assured for corn and sunflowers in areas where these crops will be grown according to the usual procedures.

To provide to timely potato planting with high quality planting material, it is essential to speed up the sorting, warming, and tuber preparation with TMTD, and to plant them only in calibrated fractions. In the next few days early cabbage should be planted, as well as garlic, onions, carrots and other small-seed early planting vegetable crops.

Special attention must be paid to winter crops because of the complex wintering conditions and their late vegetation renewal. Areas to be resown or overseeded and further care measures must be determined, also which areas need root top dressing, herbicide application, etc. Seed drills with special plowshares and attachments should be used for overseeding.

Because of late spring and some winter crop resowing, it would also be expedient to expand corn sowing for seed, millet and buckwheat inthe steppe zone and in the southern forest-steppe.

Where good soil surface loosening is possible a harrowing of winter crops should be done to provide for moisture retention and weed control. This work should be approached creatively with consideration of crop condition and soil thickening; harrows should be selected accordingly.

At the same time improvements should be made in seed growing of grain and grain-pulse crops, especially buckwheat, millet, peas and lupine.

Everything must be done to assure an increase in feed production. First of all, the planned crops, especially perennial grasses and root crops must be sown. Appropriate agrotechnology must be applied to obtain a good harvest of sown feed crops; measures must be taken to increase the productivity of natural feed crop lands. Seed growing of perennial grasses must be considerably improved, this should be done at an appropriate time within the specific framework of allocated seed plants from crops of previous years.

Because of the current weather conditions, the role of soil fertilizers is becoming more important. Local fertilizing should be used widely under sugar beets, corn, sunflowers and other leading crops where little fertilizer was used in basic tilling, combining this measure with soil preparation, utilizing combined seed drills. The required amount of fertilizer must first of all be applied under those crops which will be grown according to industrial and progressive technologies; phosphorus fertilizer should be used for row application; carbamide is most effective for leaf feeding of winter wheat in order to increase its quality and for increasing the protein content in feed crops.

Considering the peculiarities of this spring, managers and specialists of agricultural organs, kolkhozes, sovkhozes and scientific-research institutions should fulfill all essential measures directed towards unconditional plan and socialist obligation fulfillment with regard to the production and sale to the state of grain, sugar beets, sunflowers, potatoes, vegetables and other agricultural production in this concluding year of the 10th Five-Year Plan.

9443
CSO: 1811

TILLING AND CROPPING TECHNOLOGY

MODIFIED SEED DRILL FOR OVERSEEDING WINTER CROPS

Kiev SIL'S'KI VISTI in Ukrainian 18 Apr 80 p 1

[Article by A. Zubchevs'kyy, press center correspondent, Ukr SSR State Committee for Agricultural Technology on: "Overseeding Winter Crops"]

[Text] Last year machine operators at the research farm of the Cherkasskaya Oblast State Agricultural Research Station utilized an effective method of overseeding thinned winter crops.

The mechanization laboratory chief Hryhoriy Derkach, team leader Anatoliy Kovtun, machine operators Volodymyr Tretyak and Pavlo Davydenko rebuilt seed drills SZU-3,6, SZ-3,6 and SUK-24. Instead of disk plowshares which do not provide for the needed depth of seed covering, they installed modified top dressing chisels taken from spiked cultivators KRN-4,2. The chisels were adjusted to a height of six-seven cm in the lower section. In the front, segments were welded onto them made from the disk plowshares of seed drills. In order to attach the working parts to guides, metal plates (12 mm thick) were welded to the posts. Three openings were drilled in each to attach seed drill guides. To change the angle of chisel soil entrance the openings were drilled in an appropriate arc.

This simple modification provided for high quality overseeding of winter crops without injuring those plants which remained and covering the seed with the right amount of soil.

This problem was solved differently by machine operators in the Zolotonivs'kyy and Drabivs'kyy Rayons. They combined overseeding of small areas with root top dressing of winter crops. For this purpose they modified seed drills SZ-3,6 or SZT-3,6 so that the sowing equipment could be turned on and off during motion. Cylinder gears of sowing equipment move from treadmills through a cog chain drive.

The Zolotonivs'kyy Rayon workers utilized a ratchet coupling from the SUB-48 seed drill. It was mounted on the chain drive between the central distributing gear box and the driving gear shaft of the sowing coil ignition. These couplings have already been built in many kolkhoz workshops.

How is this done? The driving 8-tooth gear is pinned and loosely mounted on the driving cylinder of the seed drill distributing box, through a transition bushing it is welded to the ratchet bushing of the coupling box. A tetrahedral shaft is pressed into the axle. A movable ratchet bushing is placed over it. With its aid the springs, washers and pins remain in continuous coupling with the driving gear. When needed the ratchet coupling is removed with a fork-lever. Thanks to a distance bar coupling, the driving gear is at all times within the action area of the chain drive shaft of the sowing coil ignition.

While the unit works a reliable signal system exists between the tractor operator and the sowers. For example, continuous root top dressing of winter crops is undertaken. But a tractor operator noticed a depression and signalled. Sowers with the aid of a ratchet coupling immediately turned on the sowing apparatus for overseeding.

Another variant was proposed by the kolkhoz imeni Suvorov in Drabivs'kyy Rayon. Seed drills SUK-24A were equipped with top dressing blades taken from KRN-4,2 cultivators instead of disk plowshares. Seed drills SZ-3,6 and others may be rebuilt in the same way.

Experienced machine operators will have no difficulty in rebuilding seed drills according to the Zolotonivs'kyy and Drabivs'kyy Rayon methods. This may be done in three to four hours in any farm workshop. Rebuilding benefits cannot be denied, overseeding dates are decreased and sowing material is utilized economically. Each field square meter is used rationally. Farmers accomplish three agricultural measures at the same time: cover the moisture in the soil, top dress the crops, and sow over depressions in the field. According to data from the Drabiv Agricultural Research Station, harvest increase following the introduction of this winter crop overseeding technology amounts to, on the average, 3.6 quintals of seed per hectare.

9443
CSO: 1811

CENTRAL CHERNOZEM--SLOWER GRAIN PRODUCTION GROWTH RATE

Moscow SEL'SKAYA ZHIZN' in Russian 25 Apr 80 p 2

[Article by A. Trubnikov, SEL'SKAYA ZHIZN' correspondent, Belgorodskaya-Kurskaya oblasts: "Output?"]

[Text] In recent years the grain production growth rate in the Central Chernozem region, as we know, has slowed down, although capital investments of many millions have been allocated here. Deliveries of mineral fertilizers and chemical plant protection agents have increased. What is the problem?

I have talked with many specialists, farm heads and scientists and listened to what they had to say. They were of like opinion: the chief cause of the lag lies in the violation of fundamental requirements of the system of land cultivation, including crop rotation. At a recent oblast conference of agricultural workers, the rector of Kursk Agricultural Institute, Prof A.I. Barbashin cited the following data. For the last four years in Kurskaya Oblast winter crops occupied 150,000 hectares less than authorized and barley 250,000 hectares more than permitted. They tried to explain the preference for barley by the yearly destruction of winter crops over significant areas. But this destruction was most often due to violation of alternation of fields: winter wheat was located over grain crops, which dry up the soil and remove many nutritive substances. A good predecessor is leguminous crops, but their share is extremely small. What has been said applies in its entirety to neighboring Belgorodskaya and other of the zone's oblasts.

Insufficient use is made of such an important reserve as high-certification seeds of the highest reproductions. This year, for example, in Kurskaya Oblast only 68 percent of the seeds of spring grain crops were first class; in Belgorodskaya Oblast--it was even less. The sowing material of leguminous and groat crops is particularly badly favored in regard to quality. In seed cultivation, the delay in conversion to its industrial basis has had a negative effect. In most places, the situation has not yet been reached for seed farms to be freed completely or even partially of selling commercial grain to the state; many of them are poorly provided with special equipment, including high-efficiency machines for cleaning and grading grain by size. There are not enough modern storehouses.

In view of significant areas of sugar beet and sunflower under grain crops, little mineral fertilizer was allocated. There was only enough for application to rows in sowing and partially for top dressing. But even with small doses, fertilizer effectiveness could have been boosted with wide-scale use of such progressive methods as root [prikornevoy] top dressing. Then take organic fertilizers. They are applied in the zone at slightly more than three tons per hectare, although maintenance of chernozem fertility, as shown by research, requires twice as much. At the same time, there are adequate stocks of humus on farms to plow it in yearly up to ten tons per hectare.

A few words on cultivation of soil. Only half is plowed for winter fallow in early, optimal time periods, and only a part of the spring crops is located on spring-plowed land. There has been a sharp reduction in the volume of such an important agrotechnical measure as shallow plowing of stubble. There are frequent cases of delayed field work, which has a negative effect on yield. It has been proved, for example, that lateness in sowing of early grain crops, even where it is only a day, reduces grain yield by 0.5-1 quintal per hectare. Losses are also caused by chronic lateness in harvesting. Even with favorable weather conditions, the harvesting of grain crops has lasted as much as a month or longer.

All these shortcomings are the result of serious defects in the organization of agricultural production and the use of available material-technical resources. It is enough to say that last year the average productivity of a standard tractor for the zone was only seven hectares--almost one-third less than in 1965. The shift coefficient of the operation of tractors and other machines has dropped.

At the same time, it is necessary to take into account that continued development of grain production is hindered by a shortage of separate machines and small doses of mineral fertilizers allocated for grain crops. Take for example, Kurskaya Oblast. Here the most effective tool in shallow plowing of stubble fields is acknowledged to be the heavy BDT-7 disk harrow, but it is being replaced (and not even in sufficient quantities) by the LDG-10 and LDG-15 stubble plows. In order to get the necessary quality of soil cultivation, it is necessary to make an additional pass or two. There are very few organic-fertilizer distributors; kolkhozes and sovkhozes are experiencing a need for high-efficiency loading equipment. They are not being issued any cable tractor shovels, while the hydraulic are not reliable in operation.

The T-150K is now the basic plowing tractor; it is equipped with a high-speed plow. But in deep plowing, it does not ensure turning over and crumbling of the soil. One is obliged to put in the furrow the less productive caterpillar tractors. There are not enough sprayers of the OVT-1 type for the application of chemical plant-protection agents; the combine load is high--200 hectares instead of the optimum 120. These results in large losses during harvesting. Clearly, planning and agricultural organs of the country and machine builders finally must create a reliable material-technical base to increase the productivity of chernozem land.

Graingrowers on their part are quite decided this year to significantly increase grain and other production. Areas of winter crops have been significantly expanded. In Belgorodskaya and Kurskaya oblasts, they are one-third larger than last year. Sowings have wintered quite well and are now being top dressed. Areas under leguminous crops in Kurskaya Oblast will be increased 75 percent. About 100,000 hectares are being set aside for clean fallow, which will ease work with organic fertilizers and improve the allocation of winter crops for the first year of the 11th Five-Year Plan.

Expansion of winter-crop fields to optimum size will contribute to a reduction of the volume of spring field work and to better organized sowing of spring crops. The Ipatov method is being adopted. Thus, 426 sowing complexes have been created on the farms of Belgorodskaya Oblast; their machine operators are competing for highest production. Something like 4,140 units for high-speed harrowing, 1,665 wide-span sowing units and 1,460 seed loaders are scheduled to go into the field. Hitched segmented harrows have also been prepared for the application of ammonia water.

It is planned to sow everywhere using the narrow-row and cross methods for optimum seeding norms. The application of fertilizers in sowing will be increased 1.5-fold over last year. Ammonia water will be applied for cultivation on sectors intended for sowing and phosphorite fertilizer--on buckwheat fields.

Agrotechnical plans include the testing and propagation of new high-yield varieties. Thus, in Kurskaya Oblast, tens of thousands of hectares have been ear-marked for Moskovskaya-35 spring wheat, L'govskiy Zelenozernyy peas, Mirnyy oats and Mironovskoye-94 millet. Seed sectors of leguminous crops are under special control.

All the conditions are present for boosting of grain farming and adding reliable stability to it. True, the old methods still make themselves felt. At a number of kolkhozes and sovkhozes in Ponyrovskiy Rayon of Kurskaya and in Gubkinskiy Rayon of Belgorodskaya Oblast, for example, a formal attitude has been expressed to the creation of sowing complexes: no full-pledged links exist for technical servicing; no attempt has been made to create the necessary cultural and living conditions for machine operators. The shortage of tractor operators is disturbing, although experience exists for the training of extra cadres exists.

Energetic measures must be taken by the engineering-technical service to make all equipment ready in the shortest possible time. So far, part of the tractors in the two oblasts has not yet been repaired. Seedgrowers still have a lot to do. The immediate task of the rural workers of this large economic region of the country is to eliminate defects as soon as possible, to successfully carry out sowing and to add stability to the Central Chernozem region.

7697
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TILLING AND CROPPING TECHNOLOGY

STAVROPOL'SKIY KRAY EXPANDS SIZE OF CROP FIELDS

Moscow PRAVDA in Russian 23 Apr 80 pp 1-2

[Article by correspondent V. Pankratov (Stavropol'skiy Kray): "The Stavropol'skiy Complex"]

[Text] The Harvest Watch: For a Good Final Result

It would seem that the springtime concerns of the grain grower are the usual ones. All the same he experiences a moment of unease anew each time he goes out to the field.

Agricultural workers in Stavropol'ya were among the first to undergo the harvest pressure. They have completed the sowing of early grains. They are putting sugar beet seeds in the soil now, and corn and sunflowers will follow. Spring crops will occupy 1.3 million hectares altogether. They are simultaneously top-dressing the winter crops, which occupy another 1.7 million hectares.

Rural workers in the kray have obligated themselves to obtain not less than 24 quintals of grain per hectare this year, to achieve a gross harvest of 4.6 million tons, and to increase the delivery of grain to the state. Currently 927 mechanized complexes are busy in the fields. The efforts of party, soviet, and economic organs, of communists and all rural workers are directed at the attainment of maximum final results, the increase of production efficiency, and improvement in the quality of products. The quest for an increase in return from the hectare is underway in many directions. One of them is the consolidation of crop rotation and, connected with this, a restructuring of work organization and of the administration within the branch.

The diversity of colors on the spring fields presents the usual picture. There are the winter crops next to shoots of wheat gathering strength, and there are the black squares of fallow. The same palette has been retained, but the colors are placed somewhat differently. Take, for example, the Kaz'minskiy Kolkhoz in Kochubeyevskiy Rayon. Five years ago sowings of winter crops in April were reminiscent of a chess board. There were 49 squares alternating with black fallow fields. Now there are four. Therefore, the size of each has increased almost ten fold.

"The equipment is more powerful, we use it in the Ipatovo manner," says mechanizer V. Nanay, "and for that you need room."

The material and technical base of the village is strengthened every year. Kray kolkhozes and sovkhozes are receiving more and more powerful tractors, combines, and other highly productive machines. It turned out that they are cramped in small fields.

What is the result? Many kray farms began to turn to larger fields. And this measure in turn required specialization and concentration of production and maximum improvement in administration.

This is what happened on the Kaz'minskiy Kolkhoz. The complex brigades which existed here previously were reorganized. Five shops were formed on the farm. One of them -- the plant-growing shop -- received all the plowland, hay fields, and pasture land. It is serviced by five mechanized complexes. V. Nanay, with his son Aleksandr, works in the grain complex, which consists of 24 persons. Each is assigned 105 hectares of plantings. It is within the power of the mechanizer to cultivate them well and on time using a high concentration of equipment. The remainder are assigned sugar beets, cultivated crops, and fodder crops. Each year they change assignments according to a rotation cycle.

This reorganization was begun on the initiative of communists and the kolkhoz board, not for the sake of form, but primarily in the name of the harvest and an increase in production efficiency. And the results are outstanding. Thanks to the consolidated crop rotation, machine productivity has risen considerably, work periods have been curtailed, and in the end there is an increase in yield. Even last year, which was dry here, saw per hectare yields of 36.6 quintals of grain, 433 quintals of sugar beets, and 36.5 quintals of corn for grain. Labor output for the production of one quintal of grain was cut to one fourth the previous level and to two thirds for sugar beets and sunflowers. The cost of products was significantly lowered. Yes, and they even require less equipment here now. For example, they have freed more than 20 tractors which they now use for other work.

Now the Kaz'minskiy machine operators have been first in the rayon to seal moisture in the soil and to sow early grains. Next come other concerns related to attaining high final yields. You see, the kolkhoz collective decided to obtain for the final year of the five-year plan per hectare yields of not less than 45 quintals of grain, 450 quintals of sugar beets, 20 quintals of sunflowers, and 50 quintals of corn for grain. Fodder fields are getting special attention. Farm workers intend to procure a sufficient supply of feed.

"We will do it," says kolkhoz chairman A. Shumskiy. "We have the means to do all that we intend to do."

The beginning made by the initiators has been supported by agricultural workers in Krasnogvardeyskiy, Ipatovskiy, Kochubeyevskiy, and other rayons. Naturally, the restructuring of the branch is being carried out within the capacities of the material and technical base and the specifics of production. Many farms of Stavropol'ya have the prerequisites for consolidating crop rotation. Among those which have successfully begun to do so are the agricultural workers of Turkmenskiy Rayon. Two years ago there were 279 grain fields here; now there are 161. As a result, the size of many has grown to 800 hectares. The areas devoted to feed crops have been increased. This year 29 mechanized sowing complexes work on the fields. Chief of the Rayon Agricultural Administration N. Yur'yev says:

"The equipment is now utilized in a more productive manner. Moreover, we have succeeded in including in the rotation large additional areas by plowing up the paths between the former small fields. This amounts to 15 to 20 hectares of fertile land on each farm and hundreds of additional quintals of wheat."

Our machines traverse the roads between the large fields. The fields are divided by timber belts. It is impossible to do without these in the Stavropol'ya where there is considerable soil erosion by wind and water. Consolidated crop rotations make it possible to carry on an active struggle against erosion, to plow without mouldboards and retain the stubble, to place the sowings in strips, and to use the entire complex of anti-erosion equipment.

The efforts of the innovators merit attention and support. The reorganization — and this is demonstrated by the experience of the Kaz'minskiy Kolkhoz collective — makes it possible not only to exploit the equipment with great success, but to organize its servicing and repair better. According to estimates by kray specialists, the concentration of machines makes possible a 30 to 40 percent increase in unit productivity. This means that fewer machines are required, and all agro-technical measures can be carried out at optimum times. For the large field there are agricultural air service pilots. Flights over large fields are easier and require less fuel. The main thing here is an increase in the effectiveness of the use of chemicals.

In other words, the estimates of specialists show that by increasing the size of the sown areas the productivity of every hectare may be increased one quarter in the very near future. Furthermore, there is a great saving.

Petrovskiy Rayon is among those where new ideas are receiving special attention. The Kolkhoz imeni Sarayev, for example, has 25,000 hectares of plowland. However, many fields are small and require consolidation. The party committee and the board are trying to conduct the work better. They are preparing the necessary estimates and outlining plans on time. Crop rotation agronomist T. Stupnikova is responsible for their fulfillment. Sowing is underway, but T. Stupnikova is already studying problems regarding the locating of winter, secondary, and afterharvest crops and the planning of schedules and the sequence of harvesting on these areas. The agronomist's proposals will be reviewed by the farm managers and specialists and after refinements and corrections will be adopted. The situation is the same on other rayon farms as well.

"Consolidated crop rotation and new forms of work organization enable us to increase the efficiency of agriculture," says First Secretary of the Stavropol'skiy Kray Party Committee V. Nurakhovskiy. "The July 1978 Plenum of the CPSU Central Committee set a specific task for rural workers: achieve an average annual grain yield of 20 quintals during the following five-year plan, but for farms in our zone, for example, the goal is 35 to 40 or more quintals. The efforts of party, soviet, and economic organs and of communists are currently dedicated to the achievement of this goal."

Increasing the size of the planted fields is an important reserve. Extending the boundaries of the fields seems at first glance to be a simple matter. If you approach this innovation in a formal manner, if will hardly lead to the desired result. Party committees and bureaus are making a vigorous effort to prevent the process of restructuring from turning into a fad or a fashion. There was discussion of this point at the recent conference of kray party organization activists.

Communists have noted that the main thing is gradual transition and concern for efficiency and good final results. In each individual case the kray party committee, relying on the opinion of specialists, weighs all the "pros" and "cons" of consolidating crop rotations. For example, on 77 farms it was judged economically inexpedient to change the size of the fields because of natural conditions.

The collective of the Stavropol' branch of the Kuban'giprozem Planning Institute played an important role here. Over the past 3 years it has prepared new land use plans for 130 kolkhozes and sovkhozes with a total area of 1.8 million hectares of land. This is almost half the arable land in our kray. Work has already been completed in 12 rayons. Consolidation of crop rotation remains to be done on 143 farms. Successful adoption of the innovation will make it possible to create interfarm enterprises for production mechanization and electrification.

Naturally, in new undertakings it is difficult to foresee everything. Consequently, even in crop rotation consolidation mistakes are sometimes made. In several rayons it is not clear when and which farm may plow up boundaries which have become superfluous and convert to the shop system of management. In a number of places there is poor control over the establishment of crop rotation consolidation, and advanced experience is poorly adopted. The Ovtsevod Sovkhoz in Izobil'nenskiy Rayon, where the land is subject to wind erosion, is executing a complex of soil protection measures and is receiving a stable harvest. The neighboring Moskovskiy Sovkhoz did not take things seriously this spring. Such is the case in Novoselitskiy, Budennovskiy, and Aleksandrovskiy rayons.

Adoption of the innovation has been somewhat delayed by insufficient supply of powerful tractors and sets of tractor-drawn equipment to the farms. This lack is felt especially keenly on large fields. Kolkhoz and sovkhoz managers complain that there are still not enough disc harrows, wide-swath surface plows, and machines for applying herbicides to the soil. There are also problems with the supply of anti-erosion equipment. When production is concentrated and the conversion to the shop structure of management is made, the importance of the operations dispatcher service increases, but it is difficult to supply the farms with the necessary apparatus.

The sowing campaign is in full swing on the fields of Stavropol'ye. Kray agricultural workers are fully resolved to mark the final year of the five-year plan with a large harvest and to successfully meet plans and socialist obligations for the sale of agricultural products to the state. The search for progressive methods of management and administration is helping field workers to achieve a rise in production efficiency and good final results.

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USSR REPORT

AGRICULTURE

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MAJOR CROP PROGRESS AND WEATHER REPORTING

ADVERSE WEATHER CONTINUES IN MOSCOW AREA, ARMENIA

[Editorial Report] Moscow TRUD in Russian on 21 May 1980, page 4, and Moscow SEL'SKAYA ZHIZN' in Russian on 21 May 1980, page 3, report a significant snowfall on 20 May. The snowfall was made possible by a cold wave which had set in during the second 10 days of May over the central European territory of the USSR. The snow cover in Moscow ranged from 1 to 3 cm. In Dmitrov it amounted to 6 cm and in Istra 5 cm. Snow fell also in Vladimirskaya, Ivanovskaya, Kostromskaya and Yaroslavskaya oblasts. While snow in this area in late May is unusual it is not a record. In 1947 the area experienced a snowfall in early June.

After the passage of a snow front the temperature usually drops sharply and frosts may be observed. The snowfall was not expected to substantially affect the course of agricultural work.

Moscow TRUD in Russian on 22 May 1980, page 4, reports the agricultural program in Armenia continues to be hampered by adverse weather. The likes of the snows which fell in April had not been seen in 100 years. The mid-April snow amounted to 25 cm in mountainous areas and the late April snow to 20 cm in places.

The heavy snow damaged greening fields, vineyards and orchards. Some livestock farms in mountainous areas were wrecked. Perennial grasses and grains were under the snow. It seemed that the weather was softening but then the other day large hail fell in Abovyanskiy Rayon, which did not melt for 3 hours. At the kolkhozes and sovkhozes in Armenia they are taking timely measures. Perennial grasses are being resown for annual and silage crops. Vineyards are being restored. Livestock installations have been completely repaired. Timely aid in the form of feed is being offered to those enterprises which suffered from the snowfall.

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COLD APRIL WEATHER CHANGES FIELD WORK PLANS

Moscow SEL'SKAYA ZHIZN' in Russian 25 Apr 80 p 1

[Article by Yu. Maksimenko (Rostovskaya Oblast)]

[Excerpts] April's unstable, cold weather changed the initial plans of Don grain growers. Planting got underway much later than usual. While last year 887,000 hectares were planted in spring crops by the beginning of the third 10 days of the month in the oblast, this year they have planted only 422,000 hectares. Now the care for the plantings of winter crops, the planting of early crops, the cultivation of the soil for row crops, and other jobs are all being done at the same time.

"The peculiarities of this spring," says the chief of the agricultural production administration of the Azovskiy Rayispolkom, A. K. Chaykin, "have made us review the reserves of the field conveyer and organize the labor of people and maneuver technical equipment more efficiently, taking advantage of each hour of good weather to carry out the field work in one continuous action. This is also being done in other southern rayons where planting work is gathering speed rapidly."

Azov grain growers were the first in the oblast to complete the planting of spring grain crops and grasses. This matter has been dealt with by farms of Peschanokopskiy, Sal'skiy, Tselinskiy, Neklinovskiy and Oktyabr'skiy rayons.

There is no need to prove how important it is for continuous work of the planting complex to have well arranged technical servicing and the elimination of malfunctions of machines in the fields, as well as the creation of conditions for the fruitful labor of the people. But people are not concerned about this everywhere. An alarming announcement came from Tarasovskiy Rayon: On many kolkhozes and sovkhozes the teams for technical assistance did not have the necessary repair materials or spare parts, and the Tarasovskiy Raysel'khoztekhnika, because it is tying up many machines in technical servicing, is not fulfilling its contractual commitments satisfactorily.

Other obstacles which prevent the farmers from working with great efficiency also appear on the path to the future harvest. Thus in Azovskiy Rayon there is no way the grain growers can influence unconscientious construction workers from the Nothern Caucasus administration for main petroleum lines, which is working on the territory of the Samarskiy and Kayal'skiy sovkhozes and other farms. They have dug up the land along many kilometers of fields, mixing clay in with the productive layer of soil, they have thrown pipes around in a disorderly manner, and they have dug open trenches. The time period for completing their work is coming to an end, but the construction workers are not even thinking about recultivation or putting the arable land they have disturbed back into circulation. There are quite a few cases like this, and there are similar complaints in other rayons of the oblast.

Spring planting is gathering force on the Don steppes. The motto of the farmers -- to conduct the work quickly and with excellent quality -- should be mandatory for everyone who is directly or indirectly involved with the land and the fate of the future harvest.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

WEATHER CONDITIONS ENDANGER WINTER CROPS

Riga SOVETSKAYA LATVIYA in Russian 12 Apr 80 p 2

[Article by M. Balin'sh, chief of the republic plant protection station: "Winter Crops Need Help"]

[Text] Last autumn the agricultural workers of the republic created a reliable basis for increasing the production of grain this year. The winter crops were planted at optimal times, in well prepared and fertilized soil, on an area that considerably exceeded the planned area. A late and warm autumn provided for uniform germination of the shoots and intensive bushing.

In places, the first snow fell on inadequately frozen soil, which caused justifiably concern, especially for the rye. Later, the frost rectified the situation. Moreover, the snow cover was considerably deeper than usual. As inspections showed, the wintering proceeded normally.

But during the first days of April the situation changed. The deep snow cover melted slowly and under it, favorable conditions were created for the development of fusarial wilt (snow mold). This fungus disease develops mainly on thick shoots of winter rye and wheat and also on plants that have been under a deep layer of snow. Fusarial wilt destroys the leaves and the growth point. As a result, the plants die rapidly.

This spring the development of snow mold is progresssing rapidly on winter crops. Therefore it is especially important to free the fields of the snow cover. If the soil has melted and the wheels of the tractor do not leave tracks, it is necessary to turn over the settled snow with heavy harrows. It is also possible to spread a thin layer of peat or organic fertilizer over the snow. This accelerates melting.

Today the major and immediate task of each agronomist, chairman and brigade leader is to keep track of the fields of winter crops constantly and, taking into account specific conditions, to take the necessary measures. The fields that have suffered from snow mold should be immediately harrowed and nitrogen fertilizers should be spread on them as soon as the condition of the soil permits. This will curtail further development of the disease. Aircraft should be used to apply the nitrogen fertilizers in all places where this is possible.

It is necessary to remind farm specialists that the damage caused by snow mold is greater on those fields where untreated seeds were planted last fall. From this one should draw conclusions for the future as well: Special attention should be devoted to the time periods and the quality of the treatment of the seeds this spring. After all, a negligent attitude toward this important work can result in the appearance of other diseases of grain crops and this means also a reduction in their productivity.

Today the fate of the grain fields of the republic depends on our efficiency.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

REPORT ON 1979 CROP SITUATION AND 1980 PROJECTIONS IN NORTHERN CAUCASUS

Krasnodar SEL'SKIYE ZORI in Russian No 1, Jan 80 pp 2-4

[Article: "Inspired Labor for the Homeland"]

[Excerpts] The material and technical base of the kolkhozes and sovkhozes of the Northern Caucasus and the Central Chernozem Zone has become considerably stronger since the beginning of the five-year plan. Large amounts of money have been invested in the development of agriculture in each rayon of our zones during this time. In the Kuban', for example, during 4 years capital investments amounted to 3.8 billion rubles, which is 710 million rubles more than during the corresponding period of the Ninth Five-Year Plan. About 8 million tons of mineral fertilizers in conventional units have been delivered to the kolkhozes and sovkhozes. Almost half of the branch's fixed production capital has been renovated here, amounting to 5.7 billion rubles. The area of irrigated land has been expanded by 93,000 hectares. Much is being done to change animal husbandry over to an industrial basis. More than 60 percent of the large horned cattle, about 80 percent of the hogs and 72 percent of the poultry in the kray have been placed in premises where all processes for their care have been comprehensively mechanized.

Last year turned out to be very difficult. The severe drought caused some of the planted areas to die off and created strain in all field work. The meteorological adversities became a serious test for all agricultural workers who, having counteracted the caprices of nature with good organization and hard work, overcame the consequences of the dry summer with the least possible outlays. Under exceptionally unfavorable weather conditions, relying on an advanced science of farming, agricultural workers of Krasnodarskiy Kray coped successfully with the tasks that had been set for the sale of grain to the state, giving the country 3.5 million tons of it. During 4 years the kolkhozes and sovkhozes of the Kuban' produced 31.4 million tons of grain, which is 239,000 tons more than the amount established by the plan. Last year farmers of Dagestan and Northern Osetiya overfulfilled the plans for grain procurements. The assignment was also fulfilled by grain growers of Kabardino-Balkariya.

In Korenovskiy, Ust'-Labinskiy, Timashevskiy, Dinskiy and Krasnogvardeyskiy rayons of Krasnodarskiy Kray the productivity of spike crops exceeded 40 quintals.

In Kabardino-Balkariya the farms of Urvanskiy Rayon in 1979 sold the state twice as much grain of winter crops as was planned and covered the assignments for procuring seed corn. They overfulfilled the plans for the sale of sunflower seeds and vegetables to the state. Workers of this rayon have reported that they have fulfilled the five-year assignment for grain procurements. They also met the five-year plans for the procurements of eggs and wool. By the 62d anniversary of Great October they had fulfilled the four-year plan for the sale of milk. The productivity of winter wheat in Urvanskiy Rayon was 43.3 quintals.

Farmers of Mayskiy Rayon and also of 15 kolkhozes and sovkhozes of other rayons of Kabardino-Balkariya poured as much grain into the grain bins of the homeland during 4 years as they were to have delivered during the entire five-year plan.

The five-year plans for procurements of sugar beets have been completed by the farms of Tambovskiy Rayon in Tambovskaya Oblast, Krasnogvardeyskiy Rayon in Belgorodskaya Oblast and Kantemirovskiy Rayon in Voronezhskaya Oblast. In Voronezhskaya Oblast the Druzhba Kolkhoz in Pavlovskiy Rayon fulfilled the five-year plan for the sale of sugar beets to the state, the Kolkhoz imeni Kuybyshev in Rep'yevskiy Rayon -- for procurements of sugar beets and eggs, and the Put' k Kommunizmu Kolkhoz in Ramonskiy Rayon -- for sugar beets, potatoes and vegetables. In Lipetskaya Oblast the five-year assignments have been completed by the collective of the sheep raising complex of the Rossiya Kolkhoz in Khlevenskiy Rayon, by workers of the Kruglyanskiy Commercial Dairy Farm of the Yelets-Lozovskiy Sovkhoz and animal husbandry workers of the Kon'-Kolodezskiy Sovkhoz-Tekhnikum have completed the assignments for the sale of meat. The assignments for procurements of potatoes have been completed by farmers of Korenevskiy Rayon in Kurskaya Oblast and of the Nal'chikskiy Sovkhoz in Kabardino-Balkariya.

The successes achieved by the Soviet people during this five-year plan are a good basis for resolving national economic problems in 1980 and for confidently advancing along the path of the construction of a material and technical base for communism. The goals of the final year of the five-year plan were clearly outlined by the November (1979) Plenum of the CPSU Central Committee and the 2d session of the USSR Supreme Soviet of the 10th convocation.

"We should place at the center of our efforts," said Comrade L. I. Brezhnev at the Plenum of the Central Committee, "the mobilization of workers for fulfillment of the assignments of the final year of the five-year plan. The assignments of the plan for 1980 are not simple. But they must be fulfilled and surpassed. What is necessary for this? It is necessary to demandingness, good organization, and a creative attitude toward the matter at hand in all sections of the national economy, in each production unit."

The basis of the development and the main condition for the improvment of national well-being is still increased efficiency of production and improved quality of the work. The Plenum of the Central Committee pointed out the need to implement the party policy for increased efficiency and quality with double or even triple energy. Special attention should be concentrated on increasing labor productivity and accelerating the intensification of production on the basis of scientific and technical progress as well as on improving the planning and administration of the economy. The results of the Tenth Five-Year Plan as a whole will depend on how we work this year, and the results of this year will also be the basis on which the following, Eleventh Five-Year Plan will be constructed.

Agricultural workers are faced with responsible tasks for improving the production and supply of high-quality food products for the workers. They will have to produce a gross output in the amount of 136 billion rubles — 11 billion more than in 1979. This increase should amount to 8.8 percent. The state is allotting immense amounts of money for the development of this vitally important branch of the national economy. This year 37 billion ruble's worth of capital investments are being allotted for this. And on the whole for the Tenth Five-Year Plan more than 137 billion rubles will be allotted for these purposes, or 3.1 billion more than was earmarked by the five-year plan. This year industry will deliver an immense number of various kinds of highly productive machines to the kolkhozes and sovkhozes. A large volume of land reclamation work will be carried out. New industrial animal husbandry complexes will be put into operation.

It is the duty of workers of the fields and farms of the Northern Caucasus and the Central Chernozem Zone to do everything possible for efficient utilization of the funds that are being invested in production and the equipment that is being placed at their disposal. They must work steadily so that the strengthening of the material and technical base will be manifested more appreciably in increased productivity and greater yields of grain, sugar beets and other crops that are cultivated on the fields of our zones. This stronger material and technical base should also have a more appreciable effect on increasing the output of animal husbandry products, especially meat. Each kolkhoz and sovkhoz should take measures so as to successfully cope with the plan set for this year for the production and procurements of farming and animal husbandry and so as to improve the quality indicators and make up for shortages of past years.

An urgent part of the farmers' work is increasing grain production. We have every opportunity to make the return from the grain field large. In the Kuban' in the final year of the five-year plan it is intended to produce 9.5-10 million tons of grain. This is a million tons more than was harvested during the most productive year of 1978. This task will be carried out primarily by increasing the productivity of grain crops everywhere.

In the kray as a whole, it has been decided to raise 40 quintals from each hectare, or 18 percent more than the average for the past 4 years. It is planned to increase the areas planted in grain crops to 2.5 million hectares. The wheat fields will produce most of the grain. Winter crops have been planted on an area of 1,885,000 hectares at times that are scientifically substantiated and confirmed by advanced practice, and on well prepared soil with only first-class seeds. A task of special importance that is facing Kuban' workers is to complete the program for the assimilation of the Azov flood planes and to increase rice production to 1 million tons in 1980. The areas planted in rice will be increased by 44,000 hectares and will amount to 220,000 hectares. The areas planted in corn will be increased to 235,000 hectares and those planted in peas -- to 100,000 hectares. The gross yield of corn grain is to be increased to 1 million tons and peas -- to 250,000 tons.

Farmers of the Don have set as their task to harvest no less than 9 million tons of grain. In solving the grain problem an important role is assigned to corn. Don farmers, like all Kuban' workers, have resolved to harvest no less than 1 million tons of corn grain.

Grain growers of the Central Chernozem Zone are filled with resolve to increase their contribution to the Russian grain supply. The kolkhozes and sovkhozes of Kurskaya Oblast intend to harvest 25-27 quintals of grain per hectare and to increase the gross yield to 3 million tons. On the farms of Belgorodskaya Oblast each hectare of grain crops should produce no less than 26 quintals, which will make it possible to increase the gross output to no less than 2.5 million tons. Agricultural workers Lipetskaya Oblast will also harvest this much grain.

Farmers of the autonomous republics of the Northern Caucasus will also increase the return from each hectare planted in grain crops. In Kabardino-Balkariya they intend to produce 550,000 tons of grain, including a minimum of 300,000-330,000 tons of corn. In order to accomplish this, the per-hectare productivity of corn must rise to 53 quintals. Field workers of Checheno-Ingushetiya will raise 520,000 tons of grain, Dagestan -- 486,000 tons, and Northern Osetiya -- 400,000 tons.

High goals have been set for increasing the production of other agricultural products as well.

A good basis has been laid for the 1980 harvest. Many rayons have expanded the areas planted in the more productive winter crops. In the Don area they have planted 2,170,000 hectares in winter crops and in Stavropol' -- 1,704,000 hectares. Winter crops will occupy 670,000 hectares in Kurskaya Oblast -- 100,000 hectares more than a year ago. In Voronezhskaya Oblast the areas planted in winter crops will be increased to 1 million hectares for the first time. In Tambovskaya Oblast winter crops will occupy 580,000 hectares.

Among the many problems which agricultural workers must solve today, the most important are to prepare well for spring field work, to ensure an increase in the productivity of agricultural crops everywhere, and to fulfill and overfulfill state plans for the production and procurements of products in 1980.

Mass quantities of organic fertilizers are being shipped onto the fields everywhere. Despite the increased production of mineral fertilizers, they have been and still are the most important for increasing the fertility of the land. More than 400 fertility detachments are working in Tambovskaya Oblast. Last year 9.5 million tons of manure and peat were delivered to the fields, or 3.5 million tons more than in 1978 and more than 3 times the quantity that was delivered 2 years ago. In Tambovskiy Rayon they have brought in more than 6 tons per hectare of arable land, and in Sampurskiy, Tokarevskiy, Zherdevskiy and Kirsanovskiy rayons -- about 5 tons. A considerable amount of work is being done to increase production and to apply organic fertilizers in Krasnodarskiy Kray. During last year more than 30 million tons were applied to the soil and during the past 4 years -- 80 million tons, which is a 1.5-fold increase over the amount during the entire Ninth Five-Year Plan. The farms of Rostovskaya and Lipetskaya oblasts, Northern Osetiya and Stavropol'skiy Kray have skillfully organized the shipment of organic fertilizers.

One of the major conditions for successful field work is a high and reliable degree of readiness of agricultural equipment. The preparation of the machine and tractor fleet for spring is in full swing. Thousands of tractors, trucks and grain combines have been put into a state of readiness. Commitments are being successfully met by machine operators of Kurganinskiy Rayon in Krasnodarskiy Kray, Novoaleksandrovskiy Rayon in Stavropol'skiy Kray, Yegorlykskiy Rayon in Rostovskaya Oblast, Groznenskiy Rayon in Checheno-Ingushetiya, Yeletskiy Rayon in Lipetskaya Oblast and others.

Each of our kolkhozes and sovkhozes has immense reserves which must be utilized completely for further successful progress. While evaluating positively what has been achieved, one cannot but see the serious shortcomings in the production of products on the farms of our zones. Many kolkhozes and sovkhozes are far from fully utilizing the existing possibilities and do not receive large harvests. During the 4 years of the five-year plan they have failed to deliver to the state a considerable quantity of agricultural products that were envisioned by the plans. And it would be incorrect to explain the poor indicators of their activity by the poor weather alone. Last year again confirmed that the effects of negative factors on the crop are much less than those of an advanced science of farming in which all of the requirements of agrotechnology are observed. One can give many examples in which, under absolutely equal conditions, the farms obtain different results because of different attitudes toward the land, technical equipment and fertilizers. The farms of Korenevskiy Rayon in Kurskaya Oblast in 1979 harvested 266 quintals of sugar beets per hectare and overfulfilled socialist commitments for their procurements, while in

L'govskiy Rayon they were able to harvest only 161 quintals of roots per hectare. In Belgorodskiy and Rakityanskiy rayons in Belgorodskaya Oblast, 10 farms obtained a grain yield of more than 25 quintals per hectare and 5 obtained less than 15; in Roven'skiy and Veydelevskiy rayons, 10 kolkhozes harvested more than 15 quintals while 14 harvested less than 10 quintals.

In Voronezhskaya Oblast Nizhnedevitskiy Rayon occupied one of the leading positions in terms of the harvest. But in recent years the per-hectare yield has decreased by 2 quintals here and the average annual gross production of grain crops has decreased by almost 50,000 quintals. And again the reason is a reduction in the level of the science of farming. They began to apply 1 ton less of organic fertilizers per hectare here. While previously they planted mainly seeds of the first class, for the 1970 harvest only 62 percent of the seeds were of this class. The planted areas were reduced by 5-6 percent by harvest time. The areas planted in winter crops were reduced unjustifiably. The large group method of applying technical equipment is being ignored. In this oblast the gross yields of grain have also decreased in Verkhnemamonovskiy, Novousmanskiy, Petropavlovskiy, Semilukskiy and a number of other rayons.

The kolkhozes and sovkhozes of our zones will have to do a good deal for further development of animal husbandry. In many rayons this branch is developing at slow rates, the indicators are still not very high for the production of meat and milk, and expenditures of labor and money per unit of output are decreasing slowly.

As we know, specific measures directed toward the development of animal husbandry were considered in depth at the July (1978) Plenum of the CPSU Central Committee. As Comrade L. I. Brezhnev emphasized repeatedly in his speech at the November (1979) Plenum of the Central Committee, "To implement the decisions of the Plenum and to increase meat production considerably in the country constitute the primary duty of managers of agricultural branches, local party and soviet agencies, specialists and all animal husbandry workers."

These days animal husbandry workers of our zones have entered the All-Union Socialist Competition and are exerting all efforts to conduct the wintering of livestock well and to increase the production and procurements of milk, meat, eggs and wool.

Nationwide socialist competition is developing ever more extensively for a worthy greeting for the 110th anniversary of the birth of V. I. Lenin and the elections to the supreme soviets of the union and autonomous republics and local soviets of people's deputies, as well as for successful completion of the Tenth Five-Year Plan. The Soviet people are filled with resolve to make every day of the new year a day of shock Leninist labor. The main thing here is the concern of each individual for steadily increasing labor productivity, efficiency and the quality of work, stepping up economy and thriftiness, and increasing organization and discipline.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

EQUIPMENT SERVICED FOR TIMELY FIELD WORK

Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1

[Article by N. Timchenko, Special Correspondent to SEL'SKAYA ZHIZN': "The Zavolzh'e is Sowing"]

[Excerpts] The farms of the Bezenchukskiy Rayon are major producers of trade and seed grain in the Central Trans-Volger Region. There are over 10,000 hectares of arable land. Using powerful technology, mineral fertilizers and Volga water, the kolkhozes and sovkhozes are committed to producing 130,000 tons of grain; 7,650 tons of sunflower seeds; 7,570 tons of potatoes; 6,800 tons of vegetables, in addition to enough reserve for livestock raising in the last year of the five-year plan. The farmers are now preparing the promising basis for a good harvest.

On the fields of the experimental-production farms "Tsentral'noye" and "Krasnogorskoye" of the Pezenchukskiy sovkhoz-tekhnikum and on those of other sovkhozes and kolkhozes, we became acquainted with the work of outstanding achievers of high-yield harvests. They have good helpers in the workers of the local raysel'khoztekhnika, who formed a series of service shops and metal workshops for the specialized servicing of field machinery, and sometimes these workers even run the units.

Nevertheless, there is one substantial flaw in the work of uniting the rayon. Having taken out the large powerful tractors "Kirovets" and T-150 for full servicing, the raysel'khoztekhnika accepts the fact that a certain number of these tractors will just be out of commission during the hot weather due to technical problems. Thus, on the largest farm of the rayon, the sovkhoz "Bezenchukskiy," due to various breakdown, some 5 or 6 powerful machines are not working.

"It is not always possible to make do with the replacements," notes F. V. Emelyanov, the first secretary of the raykom party. "We expect more direct help from the obsel'khoztekhnikas. One should not be reconciled to the breakdown of several machines."

"Last fall, the farms of Koshinskiy Rayon and their governing Volzhskiy automobile factory took the initiative in proposing that equipment be prepared ahead of time for the field work," said E. F. Chichev, the director of the farm department of the party obkom. The oblast committee approved this initiative and it found wide support. As a result, the repair of harvestors this year will be completed a month sooner than it was last year.

But, of course, the most important work of the farmers of the oblast is to complete the spring sowing. And the spring fields here are not small--some 2.5 million hectares, of which pulse crops will take 1,640,000 hectares. There is a constant struggle to synchronize the operation in order to preserve the maximum moisture in the soil. Thousands of hectares are under harrowing and cultivation. On many farms, corn, sunflowers, potatoes and early vegetables are being planted. More than 60 percent of the spring fields in the oblast are already planted.

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FIELD WORK PROGRESS IN BELGOROD SURVEYED

Moscow IZVESTIYA in Russian 18 May 80 p 1

[Article by special correspondent S. Troyan (Belgorodskaya Oblast): "The Spring Complex"]

[Excerpts] S. Strukov, the leader of the team engaged in raising sugar beets with a minimum outlay of manual labor on the Zarya Kommunizma Kolkhoz in Yakovlevskiy Rayon, is in the field for the 15th spring. I caught up with him for the first time on the 200-hectare plantation which is located near the Moscow-Simferopol' highway. The machine operator held out his palm and looked at a small handful of earth.

"Dampish," he took a breath, "but it will soon be right. We will apply herbicides at once. This late spring has not left us any time to turn around. We had to simultaneously top-dress the winter crops and sow the early grains, annual grasses, sugar beets, and after that the corn. There are no breaks like there have been in previous years, and there will be none. Here we have to count every minute. We know that the meeting of our obligations depends to a considerable degree on the sowing schedule. Last year our team harvested on the average 200 quintals of roots; this year we plan to get at least 250 quintals."

Actually, after dinner, as soon as they had applied the herbicides to kill the weeds, the collective began to sow sugar beets with two seeders right away.

This is another encounter -- in the middle of May -- on the same field. The team leader reported with satisfaction that the small collective had harrowed the planted field before the shoots had appeared and will now cultivate between the beet rows.

The winter field was expanded considerably in the oblast last fall. Accordingly this made it possible to curtail the volume of work during the current difficult spring harvest period. Still the grain growers have many worries.

"The weather allotted very little time for all the operations," says A. Bogomolov, head of the agriculture section of the oblast party committee. "So that the best times do not slip by, the sowing was done by units of three, four, and even five seeders and, as a rule, in two shifts. There were 420 sowing complexes and hundreds of detachments operating on the farms. Over 30,000 machine operators participated in the work...."

The rayon headquarters for field operations focused the attention of the agricultural workers on the most difficult conditions so as to raise a large yield in any weather. Agricultural workers in Ivnyanskiy Rayon resolved to harvest an average of 29 quintals of grain.

A. Gnivitskiy, first secretary of the Yakovlevskiy Rayon Party Committee, says:

"Winter crops occupy an area in the rayon double that of last year. But in the spring the seeds of the early grains, legumes, beets, and corn were sown on an area of 26,500 hectares. Recognizing that the grain growers are not working at the optimum times, the collectives of industrial enterprises allocated 22 tractors and almost 100 machine operators to help the agricultural workers."

All the farms in the Belgorod area are steering a straight course toward improving qualitative indicators. And as everyone knows, the basis for quality is laid long before the sowing and harvesting. The agricultural workers of the oblast laid the foundation for the 1980 harvest in the fall; they strengthened it in the winter months when they repaired the equipment and prepared the seed.

Encouraging reports are coming in one after the other. The sowing of sunflowers has been completed in the oblast; this crop is sown on 70,000 hectares. The mass planting of potatoes is underway. Day after day the sowing units are leaving the corn fields, which occupy over 260,000 hectares. For the first time over one quarter of this area has been allocated to corn for grain. The sowing of buckwheat and millet is in progress. Simultaneously the care of industrial crops is beginning.

In the last year of the five-year plan the Belgorod grain growers are counting on harvesting an average of 26 quintals of grain per hectare. Their gross harvest is to reach 2.5 million tons. They have resolved to increase the production of other crops as well. To this end the grain growers are working hard and sparing no effort.

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REVIEW OF AGRICULTURAL PRACTICES IN STAVROPOL'YE

Krasnodar SEL'SKIYE ZORI in Russian 1 Jan 80 p 1

[Article by V. Akinin, docent of the chair of economics at the Stavropol' Agricultural Institute: "With a Complex of Measures"]

[Text] The soil and climatic conditions of Stavropol'skiy Kray, which grows such varieties of wheat as Bezostaya-1, Odesskaya-51, Prikumskaya-36, and others, enable agricultural workers to increase crop yields and to improve the quality of the procured grain. In the best years purchases of strong wheat have reached 500,000 tons, but the 1978 harvest set a record. That year the grain yield totaled 26.1 quintals per hectare. Kolkhozes and sovkhozes sold 2.55 million tons to the state (70,000 tons above the target). Of this amount 58.6 percent was strong wheat. The proportion of high quality grain sold exceeded 70 percent in Apanasenkovskiy, Arzgirskiy, Blagodarnenskiy, Kochubeyevskiy, and Ipatovskiy rayons. Extra payments made to the farms totaled 49.4 million rubles for the kray.

As the experience of kolkhozes and sovkhozes has shown, high quality in grains is formed by a system of agricultural measures which must include systematic application of fertilizers to the plants and eradication of pests. For example, in 1978, 75,000 hectares of plantings received organic fertilizers and over 300,000 hectares received mineral fertilizers along with deep soil cultivation; fertilizers were applied in the rows on 42,700 hectares, and over 1.5 million hectares were top-dressed with ammonium nitrate and ammonium sulfate. Over 830,000 hectares were treated with herbicides to combat weeds, and about 318,000 with toxic chemicals to combat shield bugs. The volume of these operations and outlays on them exceeded the 1977 level 25 to 30 percent, but the sums expended were repaid with interest in additional income -- 19.6 rubles per ton. The average purchase price of one ton of grain, taking into account its high quality, even without increments for sales in excess of the plan, was 91.6 rubles compared with 72 rubles for one ton of ordinary grain. Additional outlays directed at obtaining strong and valuable wheats do not exceed 10 percent of the total outlays per hectare on the plantings.

An analysis of data on grain quality by rayon in the kray refuted the opinion that grain "strength" is mainly dependent on natural factors. The complex of agricultural measures plays a decisive role. For example, on the Kolkhoz imeni Oktyabr'skaya Revolyutsiya in Kochubeyevskiy Rayon concern for quality begins with the selection of the wheat variety and its precursor crop. As demonstrated in practice, the raising of Bezostaya-1 produces the best results following occupied fallow, perennial grasses, legumes, sugar beets, and corn raised for silage. Winter wheat precursors receive 20 to 30 tons of organic fertilizers and up to 20 quintals of mineral fertilizers. The residual effect guarantees the optimum process of nitrogen supply and the necessary ratio of elements. Leaf feeding is mandatory. It is especially effective in the phases of wheat ear formation and flowering, and the amount depends on the probable yield.

Much is being done on the farm to eliminate weeds and to prevent pests and diseases. In the ear formation stage the plants are treated with amino salt 2.4-D, and the fields are annually inspected for the presence of shield bugs.

Strong wheat fields are under the special control of specialists and managers; the haying season and grain threshing are being carried out within an extremely short period. High quality grains are cleaned and are stored separately in sheds. A sample is taken from each lot for analysis, and the "strong" label is imprinted on the invoice of the grain consignment. The variety certificate filled out in accordance with the approval or registration document is attached to the invoice.

The Kolkhoz imeni Oktyabr'skaya Revolyutsiya annually receives from 117,000 to 200,000 rubles in the form of additional payments for product quality. Of this about 20 percent is used for bonuses for field workers and specialists. This gives them the incentive for improving and preserving high quality in the product. Obviously the time has also come to review similar measures of material incentive in official recommendations for wages of workers in agriculture and grain receiving centers.

The increments system currently in use is in need of refinement. At present the purchase price of wheat is raised 30 and 50 percent when the gluten content is 28-31 and over 32 percent, respectively. It would seem that additional payments for each percent of increase in gluten content in the grain would be more effective. Such a differential would channel the efforts of the farms into obtaining high quality products.

Last year agricultural workers in the Stavropol' area undertook a serious experiment. The unusual drought led to the thinning out of the plantings and was responsible for a low grass stand; the grain was not fully formed. But up to 30 quintals of grain were harvested per hectare on farms where winter wheat was sown after fallow, semi-fallow, and legumes (especially sainfoin). Field workers exerted every effort to minimize crop losses.

The harvest-transport complexes carried out the harvest in two shifts; each unit underwent an inspection of its hermetic sealing. Grain harvesting operations, hauling, and storage take place under the supervision of people's control posts and quality control centers.

The grain is carefully prepared at the threshing floors of kolkhozes, sovkhozes, and grain receiving centers.

Taking care of this year's crop, agricultural workers in the Stavropol'ye sowed winter grains on an area of 1,704,000 hectares within a reduced time period and applied mineral fertilizers to the soil at the same time. A considerable part of the fields was top-dressed with the help of the agricultural air service. Careful adherence to the system of agricultural measures will promote a further improvement in product quality.

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WEEDS POSING A PROBLEM ON WINTER GRAIN FIELDS

Moscow PRAVDA in Russian 18 May 80 p 1

[Article by correspondent V. Pankratov (Stavropol'skiy Kray): "The Weeds Are on the Attack"]

[Text] N. Dolina, chief agronomist of the Izobil'nenskiy Sovkhoz is distressed by the sight of the winter wheat field. A considerable part of it is covered with weeds.

The picture is the same on many areas on the Moskovskiy, Zaozernyy, and Russkiy sovkhozes and other farms in Izobil'nenskiy Rayon.

Why? The peculiarities of the current spring could not have been taken into consideration in the plans for the chemical protection of plants drawn up during the winter. It has turned out to be protracted, cold, and rainy -- in a word, favorable for weeds.

It is the mission of the plant protection station to warn of possible danger from the "green conflagration" and to draw up forecasts. The directors think that the specialists are not in a position to assure reliable patrols of the fields: the station does not have the means of transportation. The workers in a number of rayon Sel'khozkhimiya associations also are not fully taking into consideration the circumstances which have developed. For example, the herbicide application plan, which was drawn up during the winter, was only half met in Kochubeyevskiy Rayon.

B. Plyasov, chairman of the kray Stavropol'sel'khozkhimiya Association, says:

"We are now placing all our hopes on the agricultural air service."

Eighty planes are flying over the fields. More than 10 of them came from Central Asia. Nonetheless, it is necessary to make efficient use of ground units as well. However, the directors of the Stavropol'sel'khozkhimiya Association, relying on the air service, are not displaying sufficient concern for effective utilization of ordinary technical resources.

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WINTER WEATHER IMPEDES LITHUANIAN FIELD WORK

Vilnius SOVETSKAYA LITVA in Russian 23 Apr 80 p 1

[Article: "Higher Rates of Work!"]

[Text] In southern and eastern Lithuania where the soil is light, field work and planting were already in full swing last week. Farms of other zones of the republic also began to plant. But on Saturday and Sunday when snow fell and it became cold, the work of preparing the soil and planting was halted in some places. And how does one organize field work under these circumstances so as not to lose time?

An EL'TA correspondent asked this question of the director of the Perloyskaya Experimental Station of the Institute of Farming, candidate of agricultural sciences, Ionas Aleksonis.

"After the snow fell the moisture remained in the heavier soils for several days. But sandy soil dries out quickly. Thus on Monday afternoon the machine operators went back out onto the fields of our experimental farm and other farms in Varenskiy Rayon. And they did the right thing, since now every hour is valuable. And on light soil, in our opinion, this week is decisive for planting early grain crops."

Even though not all the soil has dried out properly and one cannot begin the work with technical equipment everywhere, in no case can one delay in preparing the soil for planting.

Those farms which begin planting with the lightest soils and gradually move to the heavier ones are working correctly. The sequence of planting of individual crops is not of great significance now.

Planting cannot be postponed because the hollows have not dried out in some places. They can be planted somewhat later, and the rates of planting work will depend on good organization and productive utilization of technical equipment. One can do this especially well by using wide-grasp cultivators combined with two or three seeders. During planting time all technical equipment should be concentrated in the hands of certain people and on those fields where the soil has dried out and where it can be used productively.

The quality of the work should not suffer because of the rapid rates of planting and special attention should be devoted to this. Therefore one should cultivate the soil at a time when it does not stick to the equipment and the machines do not get stuck. In order for the seeds not to be planted too deep, the soil should not be cultivated to a great depth, harrows should be used after the cultivators, the unseeded strips should be joined together with the grasp of the machines, and roadside strips and edges of fields should be planted carefully. The planted field should be tamped. And it is very important that no time lapse between the preparation of the soil and the planting.

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SPRING AGRICULTURAL WORK UNDERWAY IN ORENBURG

Moscow PRAVDA in Russian 18 May 80 p 1

[Article by correspondent V. Shalgunov (Orenburgskaya Oblast): "Along with the Machine Operators"]

[Excerpts] The sowing is in full swing in the Orenburg area. Oblast agricultural workers have resolved this year to sell to the state not less than 3.85 million tons of grain, including 600,000 tons of strong and durum wheats. The campaign to achieve the planned yields is underway everywhere. Collectives of the sowing complexes, detachments, and teams are using every hour for a maximum return; advanced methods of work are being applied widely at this busy, tense time....

The authority of the agronomists is increasing now on many farms in the Orenburg area. It was won by honest work, constant reinforcement of knowledge, and love of the land. Advanced methods of farming have been adopted with the active participation of the specialists and on the basis of their creative plans. Currently 3.25 million hectares of grain will be sown with the simultaneous application of granulated superphosphate into the rows. The structure of the sowing has been improved. The target for organic fertilizer application has been exceeded. The area sown to highly productive varieties of grain has been expanded considerably in comparison with last year.

Party committees are pursuing a course of strengthening agricultural discipline on lagging farms. There is a great reserve here for increasing the return from the field. Last year 140 kolkhozes and sovkhozes harvested 2 to 5 quintals of grain per hectare less than the oblast average. If we can eliminate this gap, we can obtain about 400,000 tons of grain more.

This applies above all to farms in Sakmarskiy, Tyul'ganskiy, and Sharlykskiy rayons where exactingness toward agronomical services is slack. Frequently the indicators of neighboring farms are sharply divergent. In recent years the average grain yield has been 27.3 quintals per hectare on the Kolkhoz imeni Kuybyshev in Asekeyevskiy Rayon where T. Nasretdinov is is the chief agronomist. But the yield has been only 14.6 quintals on the adjacent Kolkhoz imeni Chapayev. P. Andreyev, the chief agronomist of this farm, performs his duty to the field badly. It disturbs him very little that the plan for organic fertilizer application has been frustrated, that serious errors have been made in crop rotations and about one third of the plowland is choked with spring wild oats. With such an attitude toward the land we cannot count of a full return from it.

The proliferation of varieties also interferes with a further upsurge in plant cultivation. Because of the inaction of the agronomical services the oblast is now raising ten varieties of wheat, seven varieties of barley, and nine varieties of oats. Many of them have been obsolete for a long time.

The field work front continues to expand in the Orenburg area. The grain growers are facing a crucial task: to conduct the sowing within a shortened time period and at a high level, to guarantee good care of the shoots, and to raise a large crop.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

STATUS OF SPRING FIELD WORK IN ESTONIAN SSR

Tallinn SOVETSKAYA ESTONIYA in Russian 30 Apr 80 p 3

> [Text] The regular joint meeting of the board of the republic's Ministry of Agriculture and Goskomsel'khoztekhnika was held yesterday. The agenda -- the status of the spring field work being carried out on the farms.

With the advent of warm weather, the fields are drying out rapidly and this is making it possible to commence selective sowing in all areas. By the beginning of the week, spring grain crops had been sown on more than 7,000 hectares throughout the republic. The greatest amount -- 16 percent of the spring grain crops -- was sown in Kingiseppskiy Rayon. In Khar'yuskiy, Khaapsaluskiy, Khiyumaaskiy, Rakvereskiy and Kokhtla-Yarveskiy rayons -- 3-4 percent of the plan. In the remaining rayons -- less. The leaders in the sowing work were the Kaarma and imeni V.I. Lenin kolkhozes in Kingiseppskiy Rayon (409 and 354 hectares respectively).

The joint meeting of the board of the republic's Ministry of Agriculture and Goskomsel'khoztekhnika was held yesterday. A discussion took place on the status of the spring field work being carried out on the farms.

By 5 May the overall plan for spring sowing had been fulfilled by 15 percent, including spring grain crops -- 19 percent. During the past week the sowing work became very extensive in nature: 17 percent of the grain fields were sown in spring crops during this period. The highest sowing rates were recorded on farms in Rakvereskiy and Kingiseppskiy rayons, where during a 7-day period spring crops were sown on 31 and 30 percent of the grain fields respectively.

Last week the status of the sowing work in southern Estonia was hindered by precipitation and in a number of rayons -- by organizational problems. For example, the plans for farms in Khaapsaluskiy Rayon called for the use of 748 tractors for sowing purposes and yet in reality only 450 such machines were moved out onto the fields. On farms in Khar'yuskiy and Khiyumaaskiy rayons, only two thirds of the overall number of vehicles in the tractor pool are participating in the spring field work.

On a number of farms, more than one half of the areas have been sown in grain crops.

The status of the winter seedlings improved somewhat during the past week and yet they could have been even better if the plantings had been given a top dressing of nitrogen fertilizers at the proper time. Only in Rakvereskiy, Khiymaaskiy and Khar'yuskiy rayons is this work nearing completion. In the remaining rayons, the status of this work is arousing serious misgivings.

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UTILIZING INDUSTRIAL TECHNOLOGY IN SPRING FIELD WORK

Moscow SEL'SKAYA ZHIZN' in Russian 4 May 80 p 1

[Article by N. Marfin, Moldavian SSR: "According to Industrial Technology"]

[Excerpts] The warm and sunny weather that has finally arrived is quickly changing the color of Moldavian fields. The fields of winter wheat are turning a lush emerald. After top-dressing and spring rains the crops are growing rapidly. Rows of green shoots of spring crops have appeared everywhere. They were sown in a matter of hours, and then the center of work shifted to industrial plantations, as the fields of sunflowers and corn are called today. This name is justified because this year over half of the sunflowers and all of the corn on 345,000 hectares are being cultivated in a new manner without the use of manual labor. This is a serious test and the farmers of Moldavia are striving to pass it with honor.

"Last year," says the first deputy chairman of the republic's kolkhoz council, V. A. Ryabchich, "corn was cultivated according to the new technology on 100,000 hectares. At that time we collected an average of almost 50 quintals of grain per hectare, and in many enterprises yield surpassed 60 and even 70 quintals. These leading enterprises were used as a basis for training cadres. Over 15,000 machine operators and 1,300 specialists received the right of entry into work in industrial technology. Over 500 complex mechanized detachments have been formed in the republic. They are equipped with all of the necessary technology. The deep late-fall plowed fields are well stocked with fertilizers and most fields have been planned since fall. First-class seeds, starting fertilizers and herbicides have been prepared. All of this creates a good basis for producing large programmed harvests."

The republic's enterprises completed the planting of sunflowers in 3-4 days and secured a high quality for each technological operation. The planting of the "sun's flower" has served as a type of test of strength on plantations using industrial technology. The work in large detachments has enabled farmers to distribute sunflowers everywhere in the optimal period despite the caprices of weather.

A characteristic feature of this year's spring is the concern for quality and for raising the effectiveness of each technological device. Today we are speaking of using industrial technology not on individual plots but on the total area. Under such conditions it is especially important to expand the boundaries of utilizing progressive experience.

And what is the status of the initiators of industrial technology? The farmers of Chadyr-Lungskaya Oblast are completing all work at a steady pace without tolerating the minutest divergences from plans and programs. There are about 50 sowing complexes operating in 23 mechanized detachments. They usually utilize the broad Bekker and SUPN-8 sowers, whereas the lighter SPCh-6 sowers are used on sloping and wet lands. Despite the rainfall this has enabled farmers to maintain the optimal work schedule for the zone. In Chadyr-Lungskaya Oblast each field has received a registration certificate and there is a clear system of controls over quality.

In contrast to past years, this spring soil mulching has been very popular in all zones of the republic. On land levellers simple floats are attached to harrows. The floats are usually wooden bars or metal planks. The enables farmers to plan plantations better and to better preserve moisture in the soil.

Industrial technology requires new equipment and attachments. In this matter significant aid is rendered by the chiefs and collectives of urban industrial enterprises. They have manufactured hundreds of levellers and units for the application of herbicides. Unfortunately, the enterprises of agricultural machine building which are primarily responsible for equipment are still fulfilling their obligations poorly. The Rostov Krasnyy Aksay Plant delivered only half of the spring-tooth harrows that were ordered by the republic. BDT-7 disc harrows are delivered late and sometimes incompletely.

Moldavia is the first republic in the country to introduce the new industrial technology of corn cultivation. Being pioneers brings many responsibilities. It is the duty of Moldavian farmers to make every effort to cultivate the planned harvest on the entire area.

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SPRING FIELD OPERATIONS IN VOLGOGRADSKAYA OBLAST

Moscow SOVETSKAYA ROSSIYA in Russian 29 Apr 80 p 1

[Article by V. Drobotov, Volgogradskaya Oblast: "Spring Dictates the Pace"]

[Excerpts] One hears the hum of motors everywhere in the fields. On the eve of 1 May many enterprises of Chernyshkovskiy, Kalachevskiy, Ilovlinskiy, Gorodishchenskiy and other rayons of the Don and Mezhdurech'ye have completed the sowing of mustard and barley and some have sown spring wheat.

In preparing for the current spring field operations the farmers of Volgogradskaya Oblast have taken into consideration past problems that are related to the utilization of technology in the field. An analysis shows that in the oblast for several years now the average daily output per tractor has not exceeded 8 standard hectares. Last year it was significantly lower than the levels for 1965, for example, whereas resources for repairs and technical services are expended at a rate double that of 15 years ago.

The norms for field operations sometimes do not correspond to growing technical possibilities and shift productivity is lower than planned. For example, research of the interoblast normative station shows that on the basis of a 7-hour work shift the level of norm fulfillment in oblast enterprises comprises 85.3 percent. It is even lower for individual types of field work as cultivation and sowing.

The phrase, "on the basis of the 7-hour shift" is not accidental. I would like to emphasize it because there is a psychological aspect to it, or a village tradition perhaps. What does a shift signify in the village? In the morning the tractor is started, driven to the furrows and work goes un until nightfall. They say they have completed their shift. In actuality the unit has worked throughout daylight, or 10-12 hours. But the norm is calculated on the basis of a 7-hour day! For this reason when the shift output is determined and it is said that a specific unit has fulfilled two norms, actually it turns out that the real norm (based on calculations for 7 work hours) is significantly higher than what is considered in the enterprise. This results in the insufficiently high rate of fulfillment of shift norms on the average in the oblast. More time is spent on fulfilling norms than planned.

At the present time a great deal has been done in order to influence the effectiveness of the powerful technical arsenal that Volgograd enterprises have at their disposal this spring. There are over 35,000 tractors and tens of thousands of sowers in 1,200 complexes. The extensive application of the Ipatov method for sowing is one of the characteristic features of spring. Volgograd farmers have successfully assimilated this technology for harvesting, but until today sowing complexes were utilized in every enterprise, although the oblast does have its own experience in doing so.

For a long period of time oblast agricultural organs called upon agronomists, engineers and organizors of agricultural production to study and introduce existing oblast experience for the effective utilization of technology.

In the oblast agricultural administration, where I became acquainted with the results of similar analyses, this spring serious measures are being taken to introduce high-quality farming according to the experience of leading enterprises. Sowing complexes are the main, but not the last link. Technical servicing has been organized better than last year. More trained machine operators have been prepared with a view to conducting field work during the day and night both.

There is a great deal of work in the fields. Early grains alone will occupy over 2.5 million hectares. The farmers of the Lower Volga have begun the intensive spring operations with assurance.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING WORK PROGRESS IN UKRAINE

Moscow IZVESTIYA in Russian 9 Apr 80 p 1

[Article by A. Dolenko, Ukrainian SSR: "Spring Acceleration"]

[Text] Spring has come to the fields of the Ukraine. The enterprises of Krymskaya, Zakarpatskaya, Odesskaya and Khersonskaya oblasts are sowing spring grains and legume crops, grasses and vegetables. Grain farmers are striving to cultivate the largest harvest during the final year of the five-year plan.

The basic grain in the Ukraine is winter wheat. It occupies 10,409,000 hectares in the republic, much more than in previous years. Special attention is now being given to winter fields. Crops, which have been covered by an ice core for a long time, are now being carefully examined and the areas that will be resown completely or partially are being determined. Measures are also being taken to increase the yield of grain from strong and valuable wheats. Winter crops are being top-dressed. On large areas the radical method of fertilizer application to a depth of 3-5 centimeters is being utilized, enabling farmers to use the fertilizer more effectively.

Spring crops will make up a significant proportion in the gross grain yield. The cool weather in March, the abundant snow cover and the deep freezing of the soil held back the beginning of field work, especially in the southern oblasts. This means that the times for sowing early and late crops have been brought closer together. It is necessary to move quickly in order to preserve and effectively utilize moisture. For this reason machine operators are combining technological operations and utilizing large units productively.

In the enterprises that I visited recently workers are guided by the principle that the rapid work pace to prepare the soil and to sow crops must be accompanied by high quality. Machine operators are making sure that the fields are level, are applying fertilizer carefully and are sowing seed at the required and uniform depth, which is very important.

Rayon and kolkhoz staffs on the organization of socialist competition are doing everything possible in order to improve the effectiveness of labor competition, to extensively utilize moral and material incentives and to disperse the experience of leading enterprises.

It has become traditional to hold a meeting on the eve of the start of sowing operations to discuss existing problems, to elaborate the plan of action and to deal complexly with goals. Thus, at the meeting in the link of Hero of Socialist Labor Yemel'yan Parubka of the Kolkhoz imeni Suvorov, Zhashkovskiy Rayon, there was an exchange of experience on raising sugar beets on the basis of complex mechanization. The beet farmers of Cherkasskaya Oblast made innovative recommendations on the technology of the mechanized production of sugar beets and on improving their quality. During the final year of the five-year plan they plan to cultivate 320 quintals of roots on each of 153,000 hectares and to produce 37.5 quintals of refined sugar per hectare.

It has been decided to sow this technical crop in the republic at the same time as early grains and to complete the work in 4-5 days. This will enable farmers to produce uniform shoots with the proper density of the crop stand and to guarantee a large yield and sugar content in the roots.

Here is another characteristic of the field work that has begun. In the republic the use of industrial technology to raise corn, sunflowers, soy and other crops is widespread. An attempt is being made in enterprises to avoid last year's errors, when some kolkhozes and sovkhozes sowed corn after poor predecessors, on unleveled land, without observing the sowing rate and applying fertilizer poorly.

Specialists are putting special controls on cultivating feed crops. They are setting themselves the goals of sowing mixtures of pulse crops early, of top-dressing perennial grasses and of performing irrigation operations as soon as possible in order to obtain green fodder all the sooner. The machine operators of the Ukraine have been competing for the highly efficient utilization of technology since the first days in the fields. The group method of work has become widespread and complex detachments on soil preparation and fertilizer application are operating.

Ukrainian workers are striving to complete spring field operations in the best time and with high quality and to secure the production of a good harvest during the final year of the five-year plan.

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SPRING FIELD WORK IN KRASNODARSKIY KRAY

Moscow IZVESTIYA in Russian 11 Apr 80 p 1

[Article by A. Dergachev, Krasnodarskiy Kray: "Spring Dictates the Schedule"]

[Text] In the Kuban' this year's late spring moved and shortened the sowing schedule and urged the already intensive spring operations forward. In the Zavety Il'icha Kolkhoz of Krasnoarmeyskiy Rayon there has been time to sow 1,800 hectares of early spring grains, peas and perennial grasses and 690 hectares of feed beets, green peas and tomatoes. At the same time winter grains, which occupy over 3,000 hectares in the enterprise, were top-dressed by surface methods.

In the kray special attention is given to raising strong wheats and a special technology has been developed for this purpose.

Despite how early it is, sowing equipment has arrived in rice plots. In this we find the characteristic features of the current spring. The extreme intensity of this year's sowing operations is the result of the fight to fulfill the complex program of "Rice-80" in the entire kray.

One of the integral features of the program is early sowing with deep sowing of seeds on every tenth hectare of the sowing area allocated for rice. This method of early sowing was developed in the All-Union Scientific-Research Institute of Rice. Last year this method was used to sow 9,000 hectares experimentally in all of the rice-sowing rayons of the kray. This spring this method will be used to sow 22,000 of 220,000 hectares allocated for rice.

Before sowing operations began meetings of the party-economic aktiv were held in all rice-sowing rayons to examine previous obligations and to accept new ones. They formulated the general all-cadre obligation of collecting 1,100,000 tons of grain this year.

The most organized early sowing operations are proceeding in the Krasnoarmeyskiy Sovkhoz of Krasnoarmeyskiy Rayon, where 1,000 out of 8,142 hectares will be sown.

"We plan to produce an average of 70 quintals per hectare and to harvest a total of 57 tons of rice from the entire area," said the senior agronomist of the sovkhoz, I. Nedil'ko. "The early sowing of seeds on one-eighth of our area will also enable us to test and adjust sowing complexes prior to the mass sowing of rice. This year it begins later--at the end of April or the first 10 days of May. During the harvesting we will be able to start 1.5-2 weeks early on the 'early' hectares to test our harvesting conveyor. When we do this productivity does not drop, the quality of the grain is higher than when sowing takes place at the regular time and the expenditure of irrigation water drops because the first watering of plots is not required since during this early time there is still enough moisture in the soil."

As if to make up to farmers for its lateness, spring attempts to accelerate its course. As a result, in some enterprises of the central zone of the kray sowing was begun on beets and sunflowers at almost the same time. However, whereas in the central zone beets have already been sown, in the north and northeast this work has not yet begun because the soil is not ready.

Soon the sowing of corn will begin. Of the 300,000 hectares allocated for this crop, 125,000 will be subject to the application of industrial technology, which completely excludes manual labor and curtails the cultivation of soil to a minimum. Last year industrial technology was tested in the kray on 8,000 hectares in 12 enterprises. In those places where it was used seriously and according to all regulations, the results were good despite the severe drought. For example, in the Ladozhskiy Sovkhoz of Ust'-Labinskiy Rayon corn was cultivated according to this method on 600 hectares and the yield here was 4 quintals higher than for regular crops. Expenditures for grain production turned out to be 3 times smaller.

Fields, seeds and herbicides are ready for cultivating corn according to the industrial method. However, there are problems with the delivery of technology--only one-tenth of the promised BDT-7 heavy harrows have been delivered. Machine builders are obliged to fulfill their promise to supply corn farmers with the necessary equipment. It is essential to help them in this.

Each spring brings something unexpected and different. This year it has brought many new methods and techniques for cultivating grain crops. This is understandable because during the final year of the five-year plan the farmers of Krasnodarskiy Kray have decided to harvest 9.5-10 million tons of grain. A great goal always gives rise to initiative and energy.

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SPRING FIELD WORK IN LITHUANIAN SSR

Vilnius SOVETSKAYA LITVA in Russian 8 May 80 p 1

[Article by A. Simaytis, chief of Farming Administration of Ministry of Agriculture for Lithuanian SSR and S. Tarashkevich: "Maneuvering on a Spring Field"]

[Text] Rainfall and the return of cold weather have complicated considerably the course of the spring field work. Nevertheless, the sowing operations are being carried out at a high tempo on a number of farms despite such conditions. At the present time, almost 100,000 hectares have been sown in grain crops throughout the republic, potatoes have been planted on 5,000 hectares and food root crops have been planted on 2,600 hectares. The sowing of flax and the planting of sugar beets have commenced.

Deserving of praise are the farmers in Zarasayskiy, Shal'chininkskiy, Rokishkskiy, Vil'nyusskiy and a number of other rayons, where 16-24 percent of the spring crop fields were sown in just 4 days.

In analyzing the organization of operations at kolkhozes and sovkhozes in these rayons, one cannot help but take note of the well thought out and thrifty approach being employed in carrying out the work. Here they are constantly and skilfully maneuvering their equipment, they have converted over from extensive to selective sowing, they have combined the work of wide-cut units with a smaller number of machines coupled together and they have selected tracts that are more suitable for working. The gathering up of rocks has been organized on many farms for the purpose of ensuring that the tractors and manpower are employed at maximum capability.

In particular, this work of cleaning up the fields has been carried out very successfully on farms in Vil'nyusskiy and Kupishkskiy rayons. Here field crop growers, students and patrons all went out onto the fields to assist in gathering up the rocks. Each group of individuals was assigned a specific task, payment for work carried out was agreed upon and transportation was organized for moving the workers out onto the fields.

All of these factors served to produce positive results. In those areas where the rocks formerly lay, spikes will rustle noisily this summer. The harvesting of crops on such "cleaned" tracts will be greatly facilitated owing to a lower cutting height and the supplies of straw for feed will be increased.

At the present time, special importance is being attached to carrying out the sowing work as rapidly as possible. Moreover, the circumstances have developed such that a sequence cannot be followed in sowing the crops. The time is at hand to sow all of the crops, with the exception of corn and heat-loving vegetables. And correct action is being taken by those farm specialists who, on dried out crop rotation plan tracts, are simultaneously sowing spring grain crops and annual grasses and planting potatoes. This is precisely the procedure being employed on a number of kolkhozes and sovkhozes in Kretingskiy, Moletskiy and Kapsukskiy rayons.

Although the sowing schedules play an important role, considerable importance is also attached to other agrotechnical requirements. Priority attention must be given to the quality of the work carried out under any and all conditions. Correct preparation of the soil, sowing chemically disinfected seed in accordance with the established norm and reliable placement of the seed in the soil -- these and other matters must constantly be the objects of attention by the farmers' agronomic service.

This year a great amount of attention is being given throughout the republic to expanding the plantings of pulse crops, without which it would be impossible to solve the problem of creating supplies of protein feed. But some areas are experiencing a shortage of pulse crop seed. Under such conditions, the scientists at the Institute of Farming believe that a reduction of 10-15 percent is permissible for the sowing norm for peas, vetch and maple peas, in a mixture with grains. When the agrotechnical rules for cultivating these crops are observed, it is possible to obtain sufficient seed for the future.

Those farm specialists and leaders are wrong who feel that the time for tending the winter crops has passed. In traveling over the republic's fields, one notes the presence of stagnant rain water among the plantings in a number of areas. If such water is not removed on an urgent basis, the rye crops in the flooded areas will perish in 5-7 days. This will result in considerable crop losses. It is believed that pensioners and students should be sent out to aid in removing this surface water. And following the drainage of such tracts, the weakened plants should necessarily be given a top dressing of nitrogen fertilizers. In particular, the grain growers in Vil'nyusskiy, Trakayskiy and other rayons must display haste in carrying out this work, for it was in these rayons that the winter crops entered the spring period somewhat less healthy than desired.

At the present time, as never before, it is important that a thrifty approach be employed in carrying out the field work. The skilful maneuvering of equipment, converting over to the use of coupled groups of machines as the soil dries out thus making it possible to operate the tractors at maximum capability and selecting operations which can be carried out within the prescribed amounts of time will beyond any doubt raise the tempo of the spring field operations. And the time so gained will be measured in terms of additional tons of grain, potatoes and feed.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING FIELD WORK PROGRESS, PROBLEMS IN BELORUSSIA

Minsk ZVYAZDA in Belorussian 6 May 80 p 1

[Article by M. Rusakov under rubric "ZVYAZDA Commentary": "Spring Won't Wait"]

[Text] The republic's grain farmers have a lot to do right now. It is necessary to complete the top-dressing of winter crops quickly, prepare the soil properly in good time, and plant the spring crops in the optimal period. Working selflessly, the field workers are building a reliable basis for the successful completion of state plans and socialist obligations set for the concluding year of the five-year plan.

Emulating the shock-workers and right-flank leaders, the machinery operators have mounted a shockwork watch under the slogan "Advanced Technology and Outstanding Quality in Field Operations!"

This kind of approach to the job is especially vital now. The belated onset of spring makes it mandatory to shorten the sowing of spring crops as much as possible. Calculations indicate that the farms' material-technical base makes it possible to prepare the soil for spring grain in five to six working days and plant them in the same period of time. All oblasts have the capability of planting potatoes in eight to ten days, flax and sugar beets in three. But this will require not only properly prepared equipment but also double-shift operation of each equipment unit.

Many kolkhozes and sovkhozes are doing just that. First of all, they top-dressed the winter crops with a full dose of mineral fertilizers in a very short time. Excellent indicators in this work were achieved by the grain farmers of Kletskiy Rayon. They were among the first to complete winter crop tending work on all areas. Considerable attention is being paid to the crops in Ivanovskiy, Dokshitskiy, Mozyrskiy, and other rayons. Grodnenskaya is the leader among the oblasts. Winter crops are also being well tended in Brestskaya and Minskaya oblasts.

Nevertheless, many kolkhozes and sovkhozes are not taking care of this vital matter fast enough. Whole rayons are inexcusably behind in winter crop tending operations. Thus, farmers in Baranovichskiy and Lyakhovichskiy rayons started top-dressing operations too late. The farms of Mogilevskaya Oblast are working far below their capabilities. Many kolkhozes and sovkhozes in Vitebskaya Oblast are also behind, especially in Gorodokskiy, Lioznenskiy, and Rossonskiy rayons.

Time will not wait. Managers and farm specialists will have to ensure timely completion of all winter crop tending operations. It is also essential to speed up the top-dressing of perennial grasses. But along with such rayons as Brestskiy, for example, where these operations have been completed on all areas, there are also many where the work is going poorly. Vitebskaya and Mogilevskaya oblasts are lagging especially badly.

This year, more than 3.3 million hectares are planted in spring crops in the republic. They include 1.888 million hectares in grain and legumes. Farmers have already sown 1.5 million hectares in barley, spring wheat, oats, feed grain lupine, fiber flax, vegetables, perennial and annual grasses, and root fodder. Many machinery crews are laboring valiantly, with maximum effort, in order to save every precious hour and sow the crops in the optimal times and on a high agrotechnical level.

Field operations are going smoothly and in well-organized fashion in Maloritskiy Rayon. Grain farmers there were the first in the republic to complete the sowing of early grains and legumes. This success came about thanks to the proper deployment of equipment and manpower, accurate organization, and widespread socialist competition.

Brestskaya is the leading oblast. Farmers there have completed almost 98 percent of the spring grain and legume sowing plan. Many farms have completed the sowing of barley and oats and are stepping up the pace of the work in fields planted in feed lupine, fiber flax, potatoes, and vegetables. Nevertheless, certain rayons in the oblast are not doing satisfactory work in the planting of root fodder crops and perennial grasses. Only small areas are sown so far. And there are rayons where field operations are not underway on a large enough scale at all. The work is proceeding too slowly on the farms of Lyakhovichskiy and Kamenetskiy rayons.

The same situation has developed in a number of Gomel'skaya Oblast rayons. It can hardly be considered normal when far fewer spring crops have been sown there than by the farmers in neighboring Brestskaya Oblast. The reason is that too many kolkhozes and sovkhozes are not making proper use of their time this spring.

Similar contrasts are observed in Minskaya Oblast. The kolkhozes and sovkhozes of Kopyl'skiy Rayon, for example, are now completing grain and legume planting operations; farms in Dzerzhinskiy Rayon, on the other hand, are working below their capabilities. Many farms in Grodnenskaya Oblast are also suffering from the same shortcomings and mistakes.

The pace of field operations shows that many of the kolkhozes and sovkhozes have not seriously considered the characteristics of this year's belated spring. Many specialists and managers underrate the fact that the timetables and quality of field operations largely depend on the adoption of progressive forms of carrying them out. To apply organic fertilizer on time, prepare the soil, and complete the sowing requires excellent organization of labor in all links. The fact is, however, that there are too many shortcomings in field operations that are part of the effort to produce a bumper crop.

The responsibility of the agronomists for the pace and quality of field operations is higher this year than ever before. They must monitor every field and designate the technology that is most appropriate to ensure planned yields on each land section.

To save time, farmers should not wait for the soil to mature on large tracts; the work should be done selectively. This is especially true of Vitebskaya and Mogilevskaya oblasts. But many farms are forgetting about optimal sowing times. This is the only explanation for the fact that soil preparation there, and consequently spring planting operations, are still going too slowly.

In Mogilevskaya Oblast, for example, only 141,000 hectares have been prepared for spring crops, and 107,000 hectares have been sown--18.4 percent of the plan. The equipment is not being put to work fast enough. Too much machinery is still standing idle in the equipment yards. The daily increment in planted areas comes to less than 6,000 hectares--a pretty low figure, considering that 582,000 hectares are to be sown in spring crops.

Unquestionably, field operations this year are taking place in difficult conditions. This requires highly skilled, diligent, and dedicated labor on the part of the grain farmers. A creative approach to the work is the only reliable guarantee of success. The main burden now falls on the shoulders of the machinery operators. Everyone who is responsible for the harvest must show proper concern for highly productive utilization of the equipment.

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SPRING PLANTING UNDERWAY IN KUBAN'

Moscow PRAVDA in Russian 27 Apr 80 p 1

[Article by V. Logvinov (Krasnodarskiy Kray): "Sets of Machinery Have Gone Out Into the Fields"]

[Excerpts] The unusually late spring and the rainy weather held up planting in the Kuban'. But now warm days have come and thousands of sets of machinery have gone out into the fields. Machine operators are striving to conduct the planting of spring crops during the best agrotechnical time periods.

During the final year of the five-year plan the farmers of the kray are striving to obtain 9.5-10 million tons of grain, including 1.1 million tons of rice and many other products.

Problems of increasing grain production are being resolved creatively, persistently and in a planned way in Kanevskiy, Leningradskiy, Ust'-Labinskiy, Korenovskiy, Bryukhovetskiy, Krasnoarmeyskiy, Krasnogvardeyskiy and other rayons. The kray has developed and is consistently implementing a complex of measures which make it possible to transform the Kuban' into a zone of stable and highly profitable agriculture.

The rates and quality of field work and the ensurance of the scientifically substantiated density of the plant stand on each hectare, the harvesting of spike crops in 7-9 calendar days, the destruction of weedy vegetation everywhere, the observance of the equality of planted and harvested areas -- these are the most important constituent parts of the program for transforming the Kuban' into a region of advanced science of farming. Last year for the first time the kray solved another important problem -- on an area of 740,000 hectares the fallow was turned under immediately after the harvesting of spike crops. The remaining moisture was retained in the soil.

All fields in the Kuban' are being planted with first-class seeds. New, more productive regionalized strains of wheat, barley, peas and corn have been created. Larger areas are being planted in such highly productive and more winter hardy wheats as Krasnodarskaya-39, Krasnodarskaya-46 and Severokubanka. Winter wheat on the entire area -- 1.85 million hectares -- has been topdressed with nitrogen fertilizers.

While increasing the potential of the Kuban' grain fields, it is very important for specialists and managers of rayons, kolkhozes and sovkhozes as well as all production sections to be imbued with a feeling of high responsibility for unconditional fulfillment of commitments that have been made and for complete utilization of reserves, of which there are quite a few. Thus during 4 years of the five-year plan the farms of five rayons of the kray failed to produce more than a half million tons of grain and dozens of farms failed to fulfill the plans for the sale of grain to the state. For example, the plan for grain production was not fulfilled in Novopokrovskiy Rayon. In Labinskiy Rayon, which failed to produce 127,000 tons of grain, the arrears in grain production have become chronic. The per-hectare yield of grain in this rayon has not increased during the past 4 years, but has decreased by 1.5 quintals.

The entire complex of measures for advancing the science of farming is not being carried out persistently and consistently everywhere. This is why in Starominskiy and Pavlovskiy rayons they obtain 7-9 quintals of wheat per hectare less than in the neighboring Leningradskiy Rayon.

The experience of the leading workers shows that success in the struggle for a large harvest on each farm is decided by strict observance of the rules of agrotechnology and the introudction of progressive forms of organization and payment of labor as well as the achievements of science and practice.

The Kuban' is being planted. The Kuban' is being prepared to reach a new goal.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SOWING IN VIRGIN LANDS

Moscow SEL'SKAYA ZHIZN' in Russian 29 Apr 80 p 1

[Article by A. Kostyukov, Tselinograd: "The Virgin Lands Before Sowing"]

[Text] Spring has not brought anything unexpected as yet to the farmers of the virgin lands. Warm weather arrived on schedule, without hindrances. The efficient grain farmer has already removed the storehouse of grain to ripen in the sun and has moved sowing machines into the farthest fields.

But even if the weather continues to be stable and not capricious, the farmers here cannot depend on an easy sowing period. Very little late-fall plowed fields were prepared as a result of the late harvesting. On a large area straw has been left in heaps. Last spring the cold weather held back the development of weeds and for this reason this year specialists are expecting a large outbreak of wild oats.

"In such cases the most important thing is to avoid compromises in agrotechnology and to maintain work quality," says the director of the virgin lands Izhevskiy Sovkhoz, I. Zhangurazov. "Recently we held a 'farmers conference' here at which it was agreed that care and accuracy in every operation are priority requirements. Last spring our grain farmers produced 27.8 quintals of grain per hectare. Today again the reputation of the sovkhoz fields must be maintained. This is especially true because m many efforts have already been put into the future harvest. Fallow fields have been well-fertilized with organic fertilizer and only first-class seed has been prepared for sowing. All technology is in use. We have collected it into one large complex which should complete the sowing of wheat in 7-8 days according to our calculations. Every participant in sowing operations from the machine operator to the cook today knows his role in the coming work.

Although the difficulties that await farmers are apparent, many collectives of grain farmers are disposed toward fighting for a large harvest during the final year of the five-year plan. Thus, whereas last year every third enterprise of Severo-Kazakhstanskaya Oblast produced over 20 quintals of grain per hectare, this year half of the sovkhozes and kolkhozes here have set themselves this goal.

The majority of virgin-lands enterprises possess all of the possibilities for cultivating full-weight ears. Many of them have prepared only the highest quality seed for the spring. In Kustanayskaya, Turgayskaya and Tselinogradskaya oblasts 88.5-91 percent of the sowing material is first and second class grain. Pavlodarsk and Karaganda farmers have dealt with their seed better than in past years. An important detail of this year's sowing operation is the expansion of the assortment of grain crops. In the northern rayons grain farmers are allocating large areas for the new Omskaya-9 wheat variety. In the central and southern rayons the area in Tselinnaya-21 and Karagandinskaya-2 wheat has been expanded significantly. On barley fields the proportion of Tselinnyy-5 and Donetskiy-8 varieties will increase. Since these crops showed themselves well last year, in the fall we can expect a large increase in yield due to their larger sowing area.

This spring the sovkhozes and kolkhozes of Northern Kazakhstan will increase the doses of mineral fertilizer for pre-sowing cultivation. There have been good reinforcements in the machine fleet. Many enterprises conducted very helpful winter "study semesters" and strengthened detachments of machine operators. Pavlodarskaya Oblast workers trained about 5,000 machine operators during this time, for example.

In the virgin lands the sowing schedule is always very short. For this reason it is very important to plan the entire cycle of field work ahead of time and in a business-like way. This will open up vistas for technical as well as agrotechnical maneuvers.

The agronomists of the Ruzayevskiy and Konstantinovskiy sovkhozes of Kokchetavskaya Oblast have worked creatively on their sowing work plans. They began by reviewing each field. In the description that was drawn up there are descriptions of the preliminary cultivation of a specific land area, the degree of weed infestation, moisture supplies, of how soon it will be ready for sowing and similar information. On this basis agronomists have determined the type of cultivation that each field requires and the equipment and schedule that will be utilized. A differential approach to agrotechnical methods is doubly advantageous--it is possible to curtail the amount of time needed for pre-sowing cultivation and to improve its quality.

It was noted long ago that the closer the sowing, the faster time seemed to pass. This is because in the days immediately preceding the start of work concerns are even greater than usual. Virgin land farmers have a great deal to do before sowing begins, especially in shops and equipment yards. For example, Tselinograd farmers still must ready 12 percent of their sowers and 10 percent of their cultivators, the repair of which is inexcusably behind schedule. A subject of great concern is the Kirovets tractor. If its repair is not accelerated, hundreds of powerful machines may not go into the fields. Machine operators are hindered by the shortage of spare parts for the K-700 and K-701 tractors, as before. Recently the Yaroslavl association, Avtodizel', took measures to cancel its debts to Northern Kazakhstan farmers with the delivery of spare parts for Kirovets motors, but it is not hurrying to correct the situation in some other enterprises.

Seed stores are not in good condition everywhere. The farmers of Sokolovskiy, Mamlyutskiy, Dzhambulskiy and several other rayons of Severo-Kazakhstanskaya Oblast have low-quality sowing material. There is little good-quality seed in the enterprises of the Kokchetavskaya Oblast special enterprise association, and in one-third of these there is not a single ton of first-class grain!

This spring it is very important to direct grain farmers at a compressed sowing schedule, at planning sowing operations on the basis of the maximal utilization of technology and at a clear organization of labor. Some workers, nevertheless, begin work with the intention of not rushing too much to the finish line. Thus, the enterprises of Lebyazhinskiy Rayon, Pavlodarskaya Oblast, have planned the pre-sowing cultivation of soil for 24 days and sowing of grains for 20 days. Is it possible that the load on technology is higher here than in other places? No, farmers evidently have simply decided to earn themselves the right for a lack of organization and poor work ahead of time. In such cases workers should be reminded of the value of the spring day and about the fact that fall will repay everyone according to his labor.

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SOWING COTTON IN TURKMENSKAYA SSR

Moscow IZVESTIYA in Russian 11 Apr 80 p 1

[Article by R. Pavlov, Turkmenskaya SSR: "Cotton Farmers in the Fields"]

[Excerpts] Spring did not arrive according to the calendar in Turkmeniya. Cold weather was of long duration, there was abundant rainfall with snow, and only during the middle of March did the sun turn toward spring, putting the start of field work 1-2 weeks behind schedule. Today the condition of the fields is varied. Some are covered with water, which can be seen well from an airplane; others are harrowed, which means that mass sowing is near.

Currently the reclamation workers of subdivisions of the trust, Chardzhouremvodstory [Chardzhourem water-management construction trust], have moved to the takyrs [desert soil] in a broad front. The excavator operators, Hero of Socialist Labor G. Patrin, feels that this is a unique workers' tradition--the one-time lifeless soil today is being put into the hands of efficient workers. Less than 2 years ago a detachment with heavy technology was brought to the rayon. Of a total of 130,000 hectares, one-tenth have now been assimilated--canals have been installed, intra-enterprise collectors have been built, as have pumping stations and field camps. Recently a new rayon--Dostlukskiy--was organized. Cotton farming will be its main branch.

"In the future the southern rayons of the oblast will produce about 300,000 tons of cotton," says the first secretary of the Chardzhouskaya Oblast party committee, R. Khudayberdiyev. "This is almost the same as collected by the kolkhozes and sovkhozes of the oblast last year. At that time the oblast fulfilled its obligations, but of 992 brigades, 354 were in debt. For this reason prior to the start of sowing an oblast seminar was conducted in the enterprises of Khalachskiy Rayon, which was recently awarded the challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU [All-Union Central Trade Union Council] and the Komsomol Central Committee. A school of progressive experience was organized in the best brigades of kolkhozes. We feel that specialists will complete sowing in a shortened period of time after having mastered progressive work methods.

The pace of sowing is increasing persistently The oblast press center has just received a communication from Khalachskiy Rayon that the brigades of A. Mukhtarov and A. Odayev of the Kolkhoz imeni Makhtumkuli completed sowing in 3 days. The motto and work of Kirov farmers are becoming the work norm for cotton farmers, who are entering the fields with a great desire to produce a record cotton harvest during this anniversary year--301,500 tons. The machine operators of 115 complexes will begin work in the course of 1 week.

In Maryyskaya Oblast, the primary region for the production of fine-fiber cotton, sowing was begun in an organized manner by the farmers of Bayram-Aliyskiy and Turkmen-Kalinskiy rayons. This year over 200,000 hectares have been allocated for this crop in the oblast. In five kolkhozes all cotton fields will be sown with the promising Ash-25 and 9732I varieties.

The sowing period has arrived in Turkmeniya. By utilizing every hour of good weather, cotton farmers are laying a firm foundation for the harvest and they are preparing for the 110th anniversary of V. I. Lenin's birth.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

FEED PROCUREMENT IN DAGESTANSKAYA ASSR

Moscow SEL'SKAYA ZHIZN' in Russian 4 May 80 p 1

[Article by B. Daminov; N. Komissarov, Dagestanskaya ASSR: "With Concern About Feeds"]

[Excerpts] It is an intensive work period in the fields of Dagestan. The machine operators of Babayurtovskiy, Khasavyurtovskiy, Kizilyurtovskiy and Nogayskiy rayons completed the sowing of alfalfa in the optimal time and in other places this work is also coming to an end. The alfalfa fields in the autonomous republic have grown this year by 20,000 hectares. Of them, 11,000 hectares will utilize alfalfa as an undercover crop.

The farmers of Kizilyurtovskiy Rayon have been famous as masters of cultivating alfalfa for a long time. The careful observance of agrotechnical rules, larger doses of fertilizer and abundant irrigation enable them to harvest 120-130 quintals of alfalfa hay per hectare during the vegetative period and to fully meet the needs of public livestock in feed.

In the autonomous republic it has been decided to procure no fewer than 1,300,000 tons of coarse feeds. Detachments from interfarm enterprises have been created for the joint use of the machine-tractor fleet when cultivating and harvesting grasses.

The Charodinskoye Interkolkhoz Enterprise has been producing feed for the mountainous rayons for many years now. The directors and specialists of the enterprise are striving to more broadly utilize the achievements of agronomical science and progressive practices on the raising of feed crops.

The kolkhozes and sovkhozes of the mountainous Botlikhskiy Rayon sowed alfalfa on double the planned area this year. The top-dressing of winter spike crops with mineral fertilizers and the preparation of the soil for corn have also been completed. This became possible through the effective work of the Turshunayskoye Interenterprise Association of Mechanization.

The plains enterprises of Dagestan have been producing good yields of corn grain for a long time. This spring it will coccupy 5,000 hectares. Last year a number of enterprises utilized the industrial method of corn cultivation, which yielded a weighty increase in the harvest--up to 20 quintals of grain on each irrigated hectare.

"The weather was dry, but nevertheless by utilizing the experience of Moldavian corn farmers we produced 59 quintals of corn grain on each of 100 hectares in comparison with the planned 35 quintals," said M. Dibirov, an experienced farmers form the Sultan-Yangi-Yurtovskiy Sovkhoz. Now they are working on a 75-quintal harvest.

In the sovkhoz there are four corn-farming complexly-mechanised links in operation. The entire area that has been allocated for corn has been cultivated well, the soil has received enough mineral and organic fertilizer and irrigation has taken place.

Many mechanized links of the autonomous republic are cultivating corn according to the progressive method. Farmers studied it in schools of progressive experience, which also used as their basis the links of M. Dibirov and Z. Abukov, who work in the fields of the Kolkhoz imeni Lenin, Khasavyurtovskiy Rayon, as well as on the basis of other collectives.

The rice farmers of Dagestan are also preparing carefully for sowing. They will cultivate rice on an area of 26,400 hectares. Of this, 18,000 are located in Kizlyarskiy Rayon. Here it is planned to produce no fewer than 40 quintals of white grain per hectare this year.

Farmers are striving to complete all spring work in optimal time in order to mark the final year of the five-year plan with a large harvest.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

KUBAN' WORKERS FULFILL GRAIN PROCUREMENT ASSIGNMENTS

Krasnodar SEL'SKIYE ZORI in Russian No 11, Nov 79 pp 2-3

[Article: "Using Land Efficiently"]

[Excerpts] The productive force of the field! Grain growers are investing both the power of technical equipment and their knowledge in order to steadily multiply the fertility of the land and to increase its return many times over. Under extremely difficult weather conditions, they had to fight a battle for the crops this year. Combatting the most severe drought with great mastery, firm will and self-sacrificing labor, they did everything necessary to raise and sell the state the maximum possible quantity of grain and other agricultural products. And, of course, the winners in this battle were those collectives who cared for each hectare, who did not deviate from agrotechnical laws and requirements of the modern science of farming, who spared no efforts and who worked quickly and with excellent quality.

The Kuban' workers were gratified by their victory. They fulfilled the assignments set for the kray for grain procurements. The poured 3.5 million tons of grain into the grain bins of the homeland, including 2 million tons of strong and valuable wheat and 182,000 tons of corn.

And the drought tried to have its way on the Kuban' fields: More than 100 days were unpredededentedly dry, and the relative humidity of the air dropped to the critical limit -- 12-16 percent. But, relying on an advanced science of farming based on precise observance of the recommendations of science, the grain growers of the kray harvested 31.2 quintals of grain from each hectare. Farms of Korenovskiy, Ust'-Labinskiy, Dinskiy, Timashevskiy and Krasnogvardeyskiy rayons especially distinguished themselves. The productivity of the spike crops there exceeded 40 quintals.

Of course, in a year like this it is very, very difficult to make the land be so generous. But the Kuban' workers, struggling to obtain the largest possible yields from each hectare, are arranging their grain growing strategy based on unwavering fulfillment of the commandments of highly advanced farming on each field. All field work is being done within the time periods established by science and confirmed by advanced practice, a total of 7-9 calendar days are being allotted for harvesting the spike crops and control threshings and being carried out without fail. The planting is being conducted with first-class seeds of regionalized strains and with simultaneous application of fertilizers. The equality of planting and harvesting areas is being strictly observed, as is the density of the plant stand that is established by science.

The movement for complete destruction weedy vegetation on all land areas has spread throughout the kray. Everything possible is being done so as not to allow the weeds to rob the crop plants, to steal the nutritive substances and valuable moisture in the soil, or to reduce the productive force of the fields. Because of a skillful combination of agrotechnical and chemical devices for eliminating weeds, the weediness of the cultivated areas has been significantly reduced. During the past 4 years 33,000 hectares of arable land have been freed of perennial weeds. Moreover, 100,000 hectares have been cleared of quarantine weeds. The implementation of comprehensive measures for destroying weedy vegetation made it possible in the kray annually to harvest an additional half million tons of grain and more than a million tons of sugar beet roots, worth an overall amount of about 80 million rubles.

Last year the valuable experience of the Kuban' workers in the matter of completely eliminating weeds was approved by the board of the RSFSR Ministry of Agriculture, which recommended that this practice be adopted by all farmers of the republic. A high evaluation of the initiative of workers of Krasnodarskiy Kray at the all-union conference on the problem of destroying weedy vegetation which was held recently in Krasnodar. There is no doubt that, following the example of the Kuban' workers, all farms of our zones will undertake the same general campaign for purity of the land, because immediate implementation of measures for destroying weedy vegetation is a most important condition for obtaining stable and large yields and for improving the quality of the products.

The farmers will have to attain high goals in 1980, the final year of the Tenth Five-Year Plan. And all of their thoughts are about the future harvest. Special concern is being displayed for the winter fields. As many years of experience of the kolkhozes and sovkhozes of the Northern Caucasus and the Central Chernozem Zone show, winter grain crops are better than spring crops for utilizing the moisture and nutritive substances and, as a rule, they produce larger and more stable yields. Our selection workers have isolated strains of winter wheat of the intensive type which, with an advanced science of farming and the application of increased doses of mineral fertilizers, are capable of producing 50-70 quintals of grain per hectare.

The grain growers have thought carefully about the best locations for planting the winter crops and have expanded the areas planted in them. For example, in Voronezhskaya Oblast for the first time the area planted in winter crops has been increased to 1 million hectares, and in Kurskaya Oblast -- to 672,000 hectares, which is 110,000 hectares more than last year. The planting was done at the most favorable times, with the application of mineral fertilizers and using high-quality seeds. The diagonal cross sowing and regular cross-sowing methods were used extensively.

Now, before the actual harvest, the farmers will constantly keep and eye on the areas planted in winter crops. For each field an entire complex of work must be carried to care for the planted areas, to accumulate and retain the maximum amounts of moisture and to topdress the winter fields. Without this there will not be a rich harvest.

In order to obtain a rich harvest, it is also necessary to restore in the soil the balance of nutritive substances which are annually required for the development of the plants and which are carried away by erosion processes and leaching of the soil. If this balance is not maintained, the soil becomes poor and loses its fertility.

The deliveries of mineral fertilizers to agriculture increase each year. The majority of our farms are constantly concerned about accumulating and correctly utilizing organic fertilizers as well. The Kuban' workers provide a good example. In the kray they are constantly carrying out a whole complex of organizational and technological measures for producing, storing, transporting and applying organic fertilizers as well as constructing manure storehouses and areas for storing organic fertilizers. They have set the task of decisively changing over to purposive, planned production of local fertilizers and a scientifically substantiated system of utilizing them. As a result, while under the Ninth Five-Year Plan they annually applied an average of 10.8 million tons of organic fertilizers, during 9 months of this year the fields have received more than 30 million tons of it, or 7.5 tons per hectare. In the next few years the application of manure to the fields will be increased to 10 tons per hectare of arable land here.

These days socialist competition is being developed ever more extensively for early and high-quality preparation of the machine and tractor fleet for next year's field work. The motto of this competition is "Concern for Technical Equipment -- Concern for the Harvest." Almost 50 repair brigades which have been from the best machine operators are now working in the shops of Yegorlykskiy Rayon in Rostovskaya Oblast. They have set for themselves the goal of completing the repair of all soil cultivation equipment and planting machines by 15 December 1979 and also fulfilling the plan for the fourth quarter for renovating tractors and grain harvesting combines; before 1 February 1980 they will fully prepare the machine and tractor fleet for spring field work and provide for no less than 97 percent technical readiness of tractors by this time, and 100 percent readiness of soil cultivation and planting machines. As specially created staff is in charge of operational guidance of the repair work. It is also responsible for distributing incoming spare parts, components and aggregates. The repair work is being done only by the brigade-unit method, and the piece-rate-plus-bonus system has been introduced for wages. Each repaired machine is accepted by a commission which must give it the release for operation -- "D-80."

High commitments have also been made by rural machine operators of Novoaleksandrovskiy Rayon in Stavropol'skiy Kray, Konyshevskiy Rayon in Kurskaya Oblast, Yeletskiy Rayon in Lipetskaya Oblast, Chernyanskiy Rayon in Belgorodskaya Oblast and other rayons. They are striving to make all the machine and tractor fleet ready in good time.

On many kolkhozes and sovkhozes of both zones stationary and mobile technical service points have been equipped for agricultural machines, machine stations and field camps have been arranged and areas for adjusting technical equipment have been constructed on them.

In the commitments made by the machine operators a large amount of attention is devoted to reducing the cost of repair work, economically expending fuel and lubricants, increasing the productivity of each machine and set of equipment, and maximally taking advantage of all of their technical possibilities. In particular, Novoaleksandrovskiy workers have resolved, by introducing Ipatovo technology, to handle the spring harrowing of fallow and the planting of spring grain and pulse crops in 2 working days, row crops -- in 8 days, the harvesting of grain crops -- in 10 days, the plowing under of stubble -- in 10 days, the turning over of semifallow -- in 15 days, the planting of winter crops -- in 8 days, the procurement of silage -- in 10 days, and the plowing of fallow -- in 20 working days. Machine operators of Konyshevskiy Rayon in Kurskaya Oblast have given their word to increase the productivity of machines by 5 percent in 1980, to reduce expenditures on their repair and technical servicing by 5 percent as well, and to save no less than 5 percent of the diesel fuel.

The wintertime will also be used for training the necessary number of machine operators and improving their skills so as to provide for two-shift operation of tractors, combines, trucks and sprinkling machines during the busiest periods of field work. In Yegorlykskiy Rayon in Rostovskaya Oblast more than 750 machine operators will be trained in the system of general technical training, and no less than 120 will be recertified, including 27 for operating new makes of machines. In 1980 the number of tractor operators of classes I and II in Chernyanskiy Rayon in Belgorodskaya Oblast will be increased to no less than 70 percent, and in Yeletskiy Rayon in Lipetskaya Oblast -- to 72 percent.

Agricultural workers of the Northern Caucasus and the Central Chernozem Zone marked the pre-October shock watch with persistent and fruitful labor and successful implementation of socialist commitments. They will do everything necessary to give the country more agricultural products in the final year of the five-year plan and to make a worthy contribution to the nationwide struggle for further rapid improvement in public well-being and strengthening of the might of our homeland.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

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QUALITY OF STAVROPOL' GRAIN IMPROVES

Krasnodar SEL'SKIYE ZORI in Russian No 1, Jan 80 p 21

[Article by V. Akinin, docent of the faculty of economics of the Stavropol' Agricultural Institute: "With a Complex of Measures"]

[Text] The soil and climate conditions of Stavropol'skiy Kray and the cultivation of such strains of wheat as Bezostaya-1, Odesskaya-51, Prikumskaya-36 and others make it possible for farmers to increase the productivity of the crop and to improve the quality of the grain that is procured. During the most favorable years the procurements of strong wheat have reached 500,000 tons, but the record was set with the harvest of 1978. The yield of grain crops amounted to 26.1 quintals per hectare then. The kolkhozes and sovkhozes sold the state 2.55 million tons of grain (70,000 tons more than was stipulated by the plan). Of this quantity, 58.6 percent was strong wheat. In Apanasenkovskiy, Arzgirskiy, Blagodarnenskiy, Kochubeyevskiy and Ipatovskiy rayons, the proportion of high-quality grain that was sold exceeded 70 percent. The sum of increments paid to the farms amounted to 49.4 million rubles in the kray as a whole.

As the experience of the kolkhozes and sovkhozes of the kray has shown, high quality of grain crops is provided by a system of agrotechnical measures, among which systematic fertilization of the plants and the destruction of pests are mandatory. Thus in 1978, 75,000 hectares of planted area received organic fertilizers and more than 300,000 hectares received mineral fertilizers with deep cultivation of the soil. Fertilizers were applied in the rows on 42,700 hectares and more than 1.5 million hectares were topdressed with ammonium nitrate and ammonium sulphate. More than 830,000 hectares were treated with herbicides against weedy vegetation and about 318,000 hectares, with toxic chemicals against chinch bugs. The aforementioned volumes of work and the expenditures on them exceeded the 1977 level by 25-30 percent, but the expenditures that were made were more than recouped with additional income -- 19.6 rubles per ton. The average procurement price of a ton of grain, taking its quality into account and even without increments for above-plan sales, amounted to 91.6 rubles and the price for a ton of ordinary grain was 72 rubles. Additional expenditures for strong and valuable wheat do not exceed 10 percent of the overall sum of expenditures per hectare of planted area.

An analysis of figures concerning the quality of grain in various rayons of the kray has refuted the previously existing opinion that the "strength" of the grain depends mainly on weather factors. The complex of agricultural measures plays a decisive role. Thus on the Kolkhoz imeni Oktyabr'skaya Revolyutsiya in Kochubeyevskiy Rayon, concern for quality begins with the selection of the strain and the predecessor of the wheat. As practice has shown, the best results are produced by cultivating Bezostaya-1 after occupied fallow, perennial grasses, pulse crops, sugar beets and corn for silage. For the predecessors of winter wheat, 20-30 tons of organic fertilizers and up to 20 quintals of mineral fertilizers are applied. Their subsequent effects provides for optimal conditions for nitrogen nutrition and the necessary ratio of components. Nonroot topdressing of the plants is mandatory. It is especially effective during the phases of heading and blossoming of the wheat, and the dose depends on the projected productivity.

The farm is doing much to destroy weeds and to prevent the appearance of pests and diseases. During the tillering stage, the planted areas are treated with 2.4-D amine salt, and the fields are annually inspected for chinch bugs.

The fields of strong wheat are under the constant supervision of specialists and managers, and the mowing and threshing of the grain are done in the shortest possible periods of time. High-quality grain is cleaned and stored individually under sheds. A sample is taken from each batch for analysis and the note "srong" is placed on the invoices for shipping the grain. A strain certificate which is filled out in keeping with the documents for approval or registration is attached to the invoice.

The Kolkhoz imeni Oktyabr'skaya Revolyutsiya annually receives from 117,000 to 200,000 rubles in the form of additional payments for the high quality of the products. About 20 percent of this is used for bonuses for field workers and specialists. This motivates them to improve and maintain the high quality of the products. Apparently the time has come to include additional measures for material incentives in the official recommendations regarding payment for the labor of agricultural workers and workers of grain receiving points.

The system of increments that is being applied needs to be refined. Now when the content of gluten is 28-31 percent and more than 32 percent the procurement price for wheat is increased by 30 percent and 50 percent respectively. It seems that it would be more efficient to make additional payments for each percentage point of increase gluten content in the grain. This kind of differentiation would direct the efforts of the farms toward obtaining high-quality products.

Last year farming underwent a serious experience in the Stavropol' area. The unpredededented drought led to thinning of the planted areas, caused a poor grass stand, and the grain was not fully formed. But on farms where the winter wheat was planted after fallow, semifallow and pulse crops (especially sainfoin), they harvested up to 30 quintals of grain per hectare. The field workers exerted no small amount of effort in order to reduce the losses of the crop. The harvest and transport complexes conducted the mowing in two shifts and each set of equipment was checked for sealing. The harvest work, the shipment and the storage of the grain were under the constant supervision of people's control posts and quality posts.

The grain was prepared carefully on the threshing floors of the kolkhozes, sovkhozes and grain receiving points.

Concerned about this year's crop, farmers of Stavropol' conducted the planting of winter grain crops on an area of 1,704,000 hectares in extremely short periods of time and at the same time they applied mineral fertilizers to the soil. A considerable number of fields have been topdressed using agricultural aviation. Careful observance of the system of agrotechnical measures will contribute to further improving the quality of the products.

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GRAIN SEED AND VARIETY WORK IN SARATOVSKAYA OBLAST

Moscow PRAVDA in Russian 17 May 80 pp 1-2

[Article by A. Vorotnikov (Saratovskaya Oblast): "From Plots To the Field"]

> [Text] For the final year of the five-year plan, the Saratov farmers have resolved to supply the homeland with 3.5 million tons of grain. At the present time, 1,348 sowing complexes are in use out on the oblast's fields. Grain crops have been planted on approximately 4 million hectares. The successful fulfillment of the plans and socialist obligations and high final results from the work performed by the grain growers will be dependent to a considerable degree upon the seed and varieties used out on the fields.

The warm weather in the Volga region has accelerated the sowing tempo. The field work is being carried out in an organized manner on a majority of the farms in Saratovskaya Oblast. In Balashovskiy Rayon, two neighboring kolkhozes -- Krasnyy Oktaybr' and Krasnoye Znamya -- have been competing against one another for some time now in carrying out their work. The farmers are striving to employ the latest developments of the plant breeders on an extensive scale. This year the leading brigade at the Krasnyy Oktyabr' Kolkhoz, headed by V. Verbin, furnished assistance to friends in a competition to sow Saratovskaya-46 wheat. Greater use is being made of locally bred effective varieties.

The white buildings of the Scientific Research Institute of Agriculture for the Southeast can be seen in the outskirts of Saratov. This is the plant breeding center for the Volga region. It has included such eminent scientists as Professor A. Shekhurdin and Hero of Socialist Labor and Lenin prize laureate V. Mamontov. They have been replaced by a new generation of researchers. The local varieties have received widespread recognition. Last year alone they were grown on an area of more than 30 million hectares. Moreover, spring wheat occupies almost 68 percent of all of the high quality plantings in the country, millet -- 60 and winter rye -- 16 percent.

The land in Saratovskaya Oblast has become an approved training ground for the plant breeders. Here then can "go on a spree" -- the spring crop fields number some 4.7 million hectares. In particular, the farmers in the region are attracted to strong and durum varieties of wheat. The grain growers understand that the products developed by the scientists are better and thus they strive to introduce them into production operations more rapidly.

"It seems that it was only recently that we were completely satisfied with Saratovskaya-29" recalled N. Cheusov, Hero of Socialist Labor and brigade leader at the Yershovskoye Experimental-Production Farm, "Yet today we are displaying a preference for Saratovskaya-42 or Saratovskaya-46, the indicators of which are better."

Nikolay Gavrilovich has been in charge of a brigade at the Yershovskoye Farm for more than 20 years. Thorough preparations have always been made for the sowing operations. Nor has this current spring period been an exception. The sowing units were inspected in an especially thorough manner. And although all of the 37 machine operators in the brigade can be trusted, nevertheless the brigade leader inspected the sowing units himself.

The Yershovskoye Farm serves as an experimental training ground for the scientific research institute. The farm is typical of those found in the arid Zavolzh'ye region. And just as soon as a variety proves its worth here, it almost certainly is moved to other areas for use.

Three years ago, for example, four varieties of local spring wheat were sown at the Yershovskoye Farm. The greatest amount of acreage was made available for Saratovskaya-38, with only 647 hectares being set aside for the not so well known Saratovskaya-42. This year, Saratovskaya-38 has been rejected and Saratovskaya-42 has been sown on 3,165 hectares: it has better baking qualities and more stable yields.

"This farm is serving as a guide for our remaining kolkhozes and sovkhozes" stated the 1st secretary of the Yershovskiy Rayon Party Committee, A. Dmitriyev, "we set aside 108,000 hectares for spring wheat, of which 95,000 will be occupied by Saratovskaya-42. Its cropping power is greater by 1.5-4 quintals of grain. The strong wheats are very profitable crops. The state pays a worthy bonus for them. The year before last, when we turned over a large quantity of such wheat, we received approximately 7 million additional rubles."

The head of a laboratory for spring wheat plant breeding and seed production, L. Il'ina has devoted more than 30 years to the plant breeding profession.

"In particular, I value highly Saratovskaya-42, 44 and 46" stated Lidiya Gerasimovna, "They are better than the former varieties in terms of all indices. But at the present time we are striving to create varieties for the entire southeastern portion of the country that will be disease-resistant."

During the past few years, the scientists have been resolving a number of complicated problems simultaneously: how to raise the cropping power of drought-resistant grasses, increase the grain yields and improve its quality. For the especially arid regions in the Zavol'zhye area and in Orenburgskaya and other oblasts, the collective at the laboratory developed a new strong wheat -- Al'bidum-1813. It furnishes three more quintals per hectare than does the present regionalized Saratovskaya-42. This new variety will soon be transferred over to the state strain testing network. The local plant breeders are intent on not yielding positions already won and achieving further progress step by step.

The scientists have accomplished a great deal. However, many unsolved problems and unfinished work still remain. For example, there are no highly productive varieties for irrigation farming. Those which are available are not satisfactory for the production workers. No alfalfa seed is available. Yet Saratovskaya Oblast is one of the largest in the country in terms of the amount of irrigated land -- there are 367,000 hectares here. Life demands that these tracts be employed primarily for forage crops, vegetables and grain. The need for highly productive grasses for irrigated fields is especially great.

The production workers value highly the work being performed by the scientists.

"The contribution they make to the harvest is very great" stated V. Sharapov, the 1st deputy chief of the oblast agricultural administration, "This spring alone we are planting spring wheat on 1.37 million hectares. Almost all of the varieties are of the Saratovskaya type. We are sowing new and promising varieties on one half of the areas. Nevertheless, it was hoped that the assistance offered by the institute would be more perceptible and more stable."

Why are the grain growers dissatisfied?

"First of all" stated Viktor Frolovich, "there is the quality of the seed. The scientific-research institute is supplying the kolkhozes and sovkhozes with very little elite seed -- seed mainly of the first reproduction is being received. Yes and there are also problems with regard to the quantities being delivered. The farmers like the Saratovskaya-46 spring wheat variety. The variety is resistant against brown rust."

"It was regionalized 3 years ago" related the chief of the seed production department of the oblast agricultural administration, A. Kostryukov, "Initially we sowed it on 4,000 hectares and this year -- on 95,000 hectares. We would be happy to expand the areas, but no seed is available."

"The reason lies in the fact that not only high quality seed but commodity grain as well is planned for us. And we are held strictly accountable for it" explained M. Sokolov, the director of the Elite Seed Production Trust of the Scientific Research Institute for the Southeast, "This is why we are unable to carry out our principal work as prescribed. Thus we are not being supplied with sufficient quantities and the quality leaves a great deal to be desired."

It is believed that the planning and agricultural organs should heed these comments.

The production workers are also disturbed over the fact that the breeding of pulse crops has been neglected in the Volga region. The local varieties of peas and vetch have become obsolete. On the sowing days it was necessary to visit many regions. And in all areas the farm leaders and agronomists complained: how much soybeans can be imported from the Far East? The time has come to have one's own soybeans. The situation with regard to seed for buckwheat and forage crops is poor; there simply is not enough.

Such "deficiencies" are explained by a weak material-technical base for seed production. The plans call for the oblast to have 42 modern seed cleaning and drying complexes. Yet only three have been placed in operation. Nor has the work been accelerated by all possible types of "settling" arrangements or by an examination by the USSR Ministry of Agriculture of the plans for corn and grain crop cleaning complexes. This has also served to delay the erection of six plants for the processing and storage of sunflower seed.

The transfer of a variety from a plot to the field is often accompanied by difficulties owing to the fact that many rayon agricultural administrations in Saratovskaya Oblast lack seed production specialists. As a rule, all strain renovation work must be carried out by the chief agronomist.

The extensive introduction of new varieties is being inhibited by operational shortcomings at individual farms. Thus, on the eve of this year's sowing operations at the Put' Lenina Kolkhoz in Lysogorskiy Rayon, incidents of negligence on the part of local agronomists and storekeepers were observed: owing to poor maintenance of the storehouse facilities, 1,000 tons of spring wheat seed turned out to be unsuitable for sowing. Prior to going out onto the fields in Novoburasskiy Rayon, the following fact was brought to light: of 3,266 tons of wheat, 2,209 tons were from a non-regionalized variety and a low reproduction. Almost similar situations prevailed in the case of the seed for barley, oats and buckwheat. Indeed, special farms have been established here for carrying out variety renovation work on an extensive scale and yet they are performing very poor work in this regard. Could this be the reason why the local hectares produce such scanty yields?

On many farms the agrotechnical schedules for carrying out the work are not being followed. Weak organization of the work and shortcomings in the technical equipping of the kolkhozes and sovkhozes are adversely affecting the operations. The farmers in all areas are complaining: the requisitions for spare parts and sowing equipment are being handled in a very poor manner. All of these factors are creating additional difficulties and hindering the development of high final results.

The following situation is especially apparent at the present time: in those areas where a close association has developed between the grain growers and scientists and where constant concern is displayed with regard to introducing new developments into operations, the work proceeds in a better manner and the cropping power as a rule is higher. For example, the varietal structure of the grain fields on farms in Krasnokutskiy Rayon is constantly being renovated. This is in large measure the result of the work being performed by specialists attached to the local experimental-plant breeding station. It is because of them that greater use is now being made of Krasnokutka-6 durum spring wheat. Compared to other varieties, its cropping power is higher by 3-4 quintals, it contains more protein and it is distinguished by high food qualities.

"This variety" stated the 1st secretary of the Krasnokutskiy Rayon Party Committee, N. Zhevak, "we sowed this year on 25,000 hectares. It bears mentioning that the sowing of early grain crops on an area of 91,000 hectares has already been completed. Using their wide-cut sowing units in a productive manner, the farmers are doing everything possible to ensure that each hectare of high quality sowing produces a high yield. And the scientists are also doing their part. They are recommending the use of a new and more promising variety for our fields -- Krasnokutka-7. We will be testing it."

The workers in Saratovskaya Oblast are fully resolved to provide the country with a fine harvest. And excellent grain will testify to the laborious work carried out not only by the plowing and sowing personnel but also by the scientist-plant breeders.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

WHEAT PLANTING--Tselinogradskaya Oblast--The grain fields in Tselinogradskaya Oblast occupy 2.8 million hectares. Within a few days they will resound with the hum of motors: The grain growers will begin to retain the moisture. And in the middle of May the most responsible time will begin -- the planting of wheat. It will be necessary to place the seeds in the soil in 10 days -- such are the optimal time periods allowed by nature in this harsh steppe region. If you meet the schedule you will have grain, if you are late your harvest will be small. Therefore, in planting it is important to have continuous, highly productive work on the part of each set of machinery. Grain growers of virgin Priishim'ye have adopted large commitments for the final year of the five-year plan. And it is necessary to do everything possible so as to meet them successfully. [Excerpts] [Moscow PRAVDA in Russian 18 Apr 80 p 1] 11772

GRAIN, PULSE CROPS--Zaporozh'ye--Taking advantage of every hour of good weather and skillfully maneuvering technical equipment, workers of the oblast have completed the planting of early grain and pulse crops on an area of more than 130,000 hectares. [Text] [Moscow PRAVDA in Russian 26 Apr 80 p 1] 11772

MOLDAVIAN PLANTING--The April sun has generously warmed the land and the long-awaited spring work time has come to the fields of Moldavia. [Text] [Moscow PRAVDA in Russian 27 Apr 80 p 1] 11772

ALTAY GRAIN FIELDS--In the final year of the five-year plan the grain fields of Altay will occupy more than 4.5 million hectares. The farmers are planning to plant this area in 8-10 days. [Excerpts] [Moscow IZVESTIYA in Russian 12 Mar 80 p 1] 11772

SELECTIVE HARROWING--Stavropol'--Yesterday machine operators of Stavropol' began selective harrowing of areas of fields. Because of the prolonged March cold spell, the field work in the kray was begun considerably later than last year. In order to conduct the spring agrotechnical complex everywhere at the best times, the farmers concentrated technical equipment in field camps ahead of time. In a state of complete readiness are thousands of mobile complex detachments with specialized teams for preventive maintenance and on-the-spot repair of the sets of machinery. This is the third spring during which Stavropol' workers have used technical equipment according to the method of their Ipatovo compatriots. The experience that has been accumulated will make it possible for the grain growers of the kray to take care of the harrowing rapidly and then, in keeping with the same condensed schedule, to complete the planting and obtain vigorous shoots before the dry steppe winds begin to blow. [Text] [Moscow TRUD in Russian 23 Mar 80 p 1] 11772

LATVIAN SPRING WORK--On the whole this year spring planting is somewhat ahead of last year. Thus the spring grain crops were planted on approximately 5,000 hectares more than they had been by this time last year. The planting has been started in earnest in Kuldigskiy, Liyepayskiy, Talsinskiy and Rizhskiy rayons. Ventspilsskiy farmers have successfully begun planting. Other spring work is also continuing. The treatment of seeds of grain crops is being completed and the top dressing of winter crops is continuing. The areas planted in winter crops require careful attention. In many places they are weak and have been subjected to "snow mold." Specialists must devote special attention to winter crops. There are now about 10,000 tractors in operation on the fields of the republic. Primary attention should be devoted to the quality of the entire complex of spring field work -- from cultivating the soil to planting the seeds. Each day the planting gathers speed. Agricultural workers are displaying a high level of organization. Each day counts now. The main thing is for all work to be done at the optimal times and with high quality. [Text] [Riga SOVETSKAYA LATVIYA in Russian 25 Apr 80 p 1] 11772

IPATOVO EXAMPLE--Simferopol'--Spring came late for grain growers on the Crimean peninsula. Today the planting of early spring crops has been started on the farms of many rayons. About 300 comprehensive mechanized detachments and teams assumed a good tempo from the very first hours. The prolonged cold spells made it necessary for the seeders to hurry: They allotted only 3 or 4 working days for planting peas, barley, oats, grain mixtures and grasses on an area of 100,000 hectares. Special commissions are checking on the quality of the work. Detachments for soil fertility are also working hard, having decided to apply 10 tons of organic fertilizers to each hectare of arable land. The fields are being provided with mineral fertilizers more generously than in past years. Superphosphate granules are being applied to the soil along with first-class seeds of regionalized strains. The areas planted in corn that is harvested for grain in the oblast are increasing considerably and the areas planted in soybeans are being doubled. These crops will be cultivated for the first time according to industrial technology. Farmers of the Crimea intend to obtain no less than 2.1 million tons of grain this year. [Text] Moscow SEL'SKAYA ZHIZN' in Russian 4 Apr 80 p 1] 11772

SPRING WORK--Elista--The flag of spring field work was raised earlier than usual by farmers of one of the largest rayons in Kalmykiya, Iki-Burul'skiy. Striving not to waste a single hour of good weather, they were the first in the republic to bring all planting equipment and also soil cultivation equipment into the fields and they have retained the moisture on tens of thousands of hectares of arable land. They are conducting the harrowing and top-dressing of winter grain crops and feed crops simultaneously. Working in two shifts, the Iki-Burul'skiy workers have set themselves the task of harrowing all the arable land and the winter crops and also planting early spring crops in a record short time--50-70 working hours. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 25 Mar 80 p 2] 11772

ORGANIC FERTILIZER APPLICATION--Smolensk--Farmers of the oblast fulfilled the plan for the application of organic fertilizers ahead of schedule. They brought 7.3 million tons of peat compost onto the fields. Specialized detachments are engaged in delivering the organic fertilizers. They have more than 3,000 tractors and trucks at their disposal. The machine operators have resolved to apply more than a million tons of fertilizers to arable land in excess of the plan. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 4 Apr 80 p 1] 11772

IRRICATED LAND--Saratovskaya Oblast--The farmers are especially concerned about irrigated land. There are now 360,000 hectares of this land in Saratovskaya Oblast. The area is immense and now it is important to make sure that it is used very efficiently. What is being done by those who show concern for a full return from the irrigated hectare not in words, but in deeds? On the vergin land Sovkhoz imeni Rodishchev in Novouzenskiy Rayon, now, ahead of time, even on frozen ground, as it were, during the winter, they have brought power pumping equipment to the steep banks of the Bol'shoy Uzen', and they have deployed the sprinkling machines and prepared them for operation. After the slight snow cover had melted, they began the first irrigation of perennial grasses, without delay, so as to augment the supplies of moisture. And it is really necessary to hurry. After all, on the sovkhoz they intend to obtain 70 quintals of feed units from each of 3,300 hectares of irrigated fields, which is 5 quintals more than last year's level. "The weather this year is such that the farm had to begin spring work 3 weeks later than usual," says the first deputy chairman of the ispolkom of the Saratovskaya Oblast soviet of people's deputies, V. Usin. "And this means that it is necessary to shorten the planting times to the limit without reducing the requirements on the quality of the work. This spring there will be no lapse of time between the planting of early and late crops. We are grateful that our grain growers prepared well for field work. The technical equipment was prepared on time. They created 1,400 planting complexes. Practically all of the seed that was stored up are of the first and second class, and 74 percent of them are of the first class. One thing remains now: to work in the fields in such a way as to lay a firm foundation for the future crop. And the farmers of the oblast have made a large commitment: to harvest an average of no less than 17 quintals of grain from each hectare and to deposit 3.5 million tons of grain into the grain bins of the homeland." [Text] [Moscow IZVESTIYA in Russian 27 Apr 80 p 1] 11772

SPRING ON THE STEPPE--Odesskaya Oblast--The Black Sea steppe is awaiting spring. And it will not be easy for grain growers here. There was no rain in the autumn last year and the seeds of winter crops in many places were planted in dry soil, and only the scanty October and November rains rectified the situation to a certain degree. And winter was unusually snowless. So part of the winter fields will have to be replanted. The volume of spring field work will increase because of this, of course. In addition to "repairing" the winter fields, it will be necessary in a short period of time to plant the 600,000 hectares for spring spike crops alone! This is why control inspections are being conducted again and again everywhere these days: have everything been taken into account before going out into the fields, has everything been provided for? As a rule, the farms have comprehensive plans for field work. Technological charts have been drawn up for each field. They answer the questions of what, how and with what various things are to be done and at what times. And as soon as the night frosts disappear, the grain fields will be filled with the noise of motors. Odesskaya Oblast is one of the main suppliers of seeds of hybrid corn for the entire republic. Last year, with a plan for 58,400 tons, 74,000 tons of them were prepared. The oblast fully satisfied its own needs and delivered a sufficient quantity to other oblasts. "These seeds are already for planting," says the deputy chief of the oblast grain products administration, A. Poberezhets. "The plan for their calibration was fulfilled by 103.9 percent. They are now being shipped to the farms in mass quantities." The grain growers of the oblast have set high goals for the final year of the five-year plan. And now, on the threshold of spring, they are exerting all efforts so as to get a good start immediately and conduct all work in short periods of time and with high quality. [Excerpts] [Moscow IZVESTIYA in Russian 18 Mar 80 p 1] 11772

LATE SPRING--Zaporozhkaya Oblast--Spring came late to Zaporozh'ye. The snow has not left the grain in certain rayons of the oblast--which is not at all typical for this time of year. After all there has been times when the planting had been completed by now. But the snowy winter which had no sharp changes in temperature undoubtedly favored the farmers. It is now possible to say with confidence that all winter crops--and this means 755,000 hectares of them--withstood the winter well, which makes it possible to count on a good harvest. Spring crops will also occupy a fair amount of space. An area of 300,000 hectares has been allotted to them. Machine operators intend to conduct the planting in the shortest possible periods of time. All farms of the oblast have drawn up comprehensive plans for field work. They list everything, right down to the smallest detail: who should perform one agricultural job or another, to what extent, in which field, and in how many hours or days. The kolkhoz and sovkhoz agricultural service also has its share of troubles. The preparation of seeds is being completed. On the majority of farms they have been brought up to high conditions. The use of highly productive regionalized strains will make it possible to provide for an additional yield. This year special attention is being devoted to the production of valuable and strong wheats. Zaporozh'ye workers have made commitments for the final year of the five-year plan to obtain 3,235,000 tons of grain, to eliminate the indebtedness to the state for the last work year, and to provide all the forage and other supplies for the kolkhozes and sovkhozes. The farmers of the oblast are ready to go out into the fields, into the battle for a large grain crop in the final year of the five-year plan, the year of Lenin's anniversary. [Exerpts] [Moscow IZVESTIYA in Russian 29 Mar 80 p 1] 11772

COTTON PLANTING--Ashkhabad--Yesterday farmers of Ashkhabadskaya Oblast were the first in Turkmenistan to complete the planting of fine-hybrid cotton. This valuable crop occupies 79,000 hectares of fields. Green shoots have appeared on many sections and machine operators have begun cultivating the interrows. This year grain growers of the oblast are striving to obtain 84,000 tons of raw material of the highest grade. [Text] [Moscow TRUD in Russian 17 Apr 80 p 1] 11772

SNOW IN SOCHI--It has become unusual cold in the health resort city of Sochi. To everyone's surprise, the roofs of houses, trees, bushes, streets and squares of the city were even covered with wet snow. And although it melted quickly, mixed with the spring rain, the breath of winter is still felt in many things. One does not see the rapid blossoming of the fruit trees or the vigorous appearance of emerald greenery. Heavy clouds hang low over the Black Sea. There have been cold spells at this time of year in the past, of course," says the chief of the Sochi weather bureau, D. P. Lysak. "But there has not been weather like this for a half century. For the first time we registered in our journals on the night between 16 and 17 April a negative temperature-- -1 degree in Adlerskiy and Lazarevskiy Rayons. And while only wet snow with rain fell in the city itself, at Krasnoy polyane and on Ochishkho mountain in places only 600 meters above sea level, the snow cover was as much as 10 centimeters deep. This meteorological anomaly is explained by the strong onslaught of cold Arctic air into the Black Sea region. With speeds of 80-100 kilometers per hour, this northern stranger tore into the relatively warm masses of Black Sea air and cooled them, thus creating heavy cloudiness. But those who come here for vacation should not be disturbed. A warm spring sun will hang over Sochi again in the next few days. [Text] [Moscow TRUD in Russian 19 Apr 80 p 4] 11772

MASTERY AGAINST BAD WEATHER--Farmers of the Ukraina Kolkhoz in Kirovskiy Rayon in Krymskaya Oblast have begun to plant sunflowers. The area planted in this valuable oil-bearing crop has been increased by 100 hectares this year. The machine operators waited until the soil warmed to 8-10 degrees. But the weather turned cold. Finally the workers of the agrochemical laboratory gave the order: Take the sets of equipment to the fields. On the first day more than 100 hectares were planted. The tractor operators A. Molcahnov and A. Konivets are working efficiently and smoothly. True, the bad weather is still interrupting the work. But as soon as the rain stops and the soil dries out, the machine operators immediately continue the planting. [Text] [Moscow TRUD in Russian 23 Apr 80 p 2] 11772

UKRAINIAN CORN--Kiev--The areas planted in corn have been expanded considerably on the farms of the Ukraine, where they have begun mass planting of this grain and forage crop. The areas planted for grain alone will occupy almost 2 million hectares, which is almost 1.5 million more than last year. Industrial technology for cultivating this crop is becoming widespread on the fields. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 May 80 p 1] 11772

CORN PLANTING--Donetsk--Donetsk farmers have begun mass planting of corn, which occupies 180,000 hectares in the oblast. It will be cultivated according to industrial technology on one-third of all the area allotted for this grain and forage crop. This will make it possible to reduce expenditures on grain production to a minimum. Machine operators of the oblast intend to increase the gross yield significantly and obtain a 50-quintal yield from each planted hectare. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 May 80 p 1] 11772

WIDE-GRASP EQUIPMENT--Volgograd--Wide-grasp sets of equipment more than doubled the rates of work on the corn fields of the oblast. On the Archedinskiy Sovkhoz in Frolovskiy Rayon, for example, 10 of these sets of equipment prepared the soil on an area of more than 1,500 hectares in a day. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 May 80 p 1] 11772

KAZAKH CORN PLANTING--Alma-Ata--Mass planting for corn for grain has been started in the southern oblasts of Kazakhstan. [Text] [Moscow TRUD in Russian 27 Apr 80 p 1] 11772

IRRIGATED CORN FIELDS--Tashkent--The warm sun of March dried the irrigated land in Tashkentskaya Oblast and now the machine operators have taken out the sets of planting machinery. Corn growing has been developed especially extensively this year. This is because of the commitment of the animal husbandry workers of the oblast to sharply increase the production of meat, milk and other products. Farmers of the oblast have resolved this year to increase the production of "amber grain" to 146,000 tons -- 50,000 more than last year. This large increase in output will be achieved as a result of the assimilation of less valuable land and also by increasing the return from each hectare. [Text] [Moscow TRUD in Russian 28 Mar 80 pl] 11772

CATCHING UP--Severo-Osetinskaya ASSR--The late spring delayed planting work in Northern Osetiya this year. It was begun 2 weeks later than usual. In order to make up for lost time and conduct the planting within extremely short time periods, all the farms are combining technological operations and utilizing wide-grasp sets of machinery. Rural trade-union organizations of the republic have assumed control over the quality of the work. More than 200 mechanized detachments and teams have resolved to strive for a yield of 80-100 quintals of corn grain from each irrigated hectare this year. [Text] [Moscow TRUD in Russian 23 Apr 80 p 1] 11772

CORN PRODUCTION GOALS--Rural workers of Northern Osetiya have set high goals for themselves -- to harvest 165,000-170,000 tons of "gold" grain, which will require a yield of 34.5 quintals per hectare. There are 29 mechanized teams who are striving to obtain 70 quintals from each hectare and 11 have committed themselves to obtaining 100 quintals of grain per hectare. Industrial technology is being applied on 45,000 hectares. Each day the work is expanding on the corn plantations of the Northern Caucasus. The planting is in full swing in Dagestan and the Checheno-Ingushskaya ASSR. Machine operators are competing to mark the final year of the Tenth Five-Year Plan with large crops. [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 27 May 80 p 1] 11772

ON THE RICE PADDIES--Simferopol'--The prolonged spring caused rice growers of the Crimea many troubles. It was necessary to conduct the work on the paddies by fits and starts and to take the technical equipment to places where the soil had dried out. Thousands of hectares have already been planted in this valuable groat crop by farmers of the Pyatizernyy, Shturm Perekopa and Risovyy sovkhozes. This year it will be necessary to plant 20,000 hectares in rice in the Crimea. In order to accelerate the preparation of the soil and planting, enterprises of Sel'khoztekhnika and Soyuzsel'khozkhimiya have sent their tractors and other machinery to the farms. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 2 May 80 p 1] 11772

MECHANIZED DETACHMENTS--Zhitomir--For the first time in the oblast 40 mechanized detachments of the agrochemical service have taken on a considerable part of the spring grain growing problems. In a short period of time they delivered 1.5 million tons of organic fertilizers to the fields and applied mineral fertilizers to the soil on 30,000 hectares. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Apr 80 p 1] 11772

MORE PRODUCTIVE RICE PADDIES--Vladivostok--Civil aviation pilots got the unusual spring "planting" underway on the fields of Primor'ye. Divisions of aircraft are applying mineral fertilizers from the air to the rice paddies of the sovkhozes of the Prikhankayskaya lowland, where snow has just fallen. This year the winged farmers have more work: The rice fields of the kray have been increased to 44,000 hectares. It has been decided to apply no less than a ton of fertilizers to each of them. This will help the Primor'ye farmers to increase the gross yields of this valuable grain crop. [Text] [Moscow PRAVDA in Russian 30 Apr 80 p 2] 11772

NEW STRAINS--Tashkent--Mass planting of grain has been started on the farms of Uzbekistan. Hundreds of sets of planting machines have gone onto the fields of Andizhanskaya, Ferganskaya, Kashkadar'inskaya and Surkhandar'inskaya oblasts where the sun has already warmed the soil. This season, 90,000 hectares of arable land have been allotted to spring spike crops in the republic -- 10,000 more than last year. The arsenal of grain growers has been augmented with the new regionalized strains of Krasnovodopadskaya-210 wheat and Sholpan barley. As tests showed, under conditions of dry, nonirrigated land they produce rich yields of grain -- more than 20 quintals per hectare. These strains have made it possible to move the grain fields of the foothill zone of Zaaminskiy Rayon. [Text] [Moscow IZVESTIYA in Russian 13 Mar 80 p 1] 11772

RIPE WINTER CROPS--Ashkhabad--The warm summery weather that came after abundant rains accelerated the ripening of winter grains in the south of Turkmenistan. The barley spiked out and the wheat entered the stem extension stage. Winter crops occupy 86,000 hectares in the republic this year. It is intended to gather no less than 20 quintals of grain from each of them. The harvest time will begin as early as May. [Text] [Moscow TRUD in Russian 27 Apr 80 p 1] 11772

SNOW ON APPLE BLOSSOMS--Yerevan--Even many old-timers of Yerevan cannot recall when snow has fallen in the middle of May here. This has only been observed twice in the last 100 years -- in 1926 and 1941. Unsually April in the republic is a time of blossoming of the fruit trees and the air is warmed to 20-25 degrees at this time of year. It is truly unusual to see snow on the green leaves. The deepest snow cover -- up to 25 centimeters -- was registered in the mountainous regions of the republic. The thermometer there showed 9-12 degrees below zero. The temperature of the soil in the Ararat valley dropped to minus 2 degrees. The Administration of the Hydrometeorological Service and Environmental Control announced that the snow fall in Armenia was caused by the movement of cold masses of air into the Transcaucasian area from the central European regions of the country. Although they have already passed, the remaining cold air can possible cause snow to fall. There will be frosts in places. Agricultural workers have met the unfavorable weather in an organized way because they were warned ahead of time about the severe cold spells. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 18 Apr 80 p 4] 11772

WINTER CROP DRESSING--Ivanovo--Farms of Furmanovskiy and Palekhskiy rayons, where snow has just fallen, have begun top dressing of winter crops with agricultural aviation crews. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Apr 80 p 1]11772

MOSCOW GRAIN CROPS--Moscow--Winter grain crops of the Moscow area are growing more and more rapidly. The inspection of the condition of areas planted in winter crops which was completed yesterday showed that they have withstood the winter well and have vigorously renewed their growth. [Text] [Moscow TRUD in Russian 27 Apr 80 p 1] 11772

DON FIELD WORK--Rostov-on-Don--Grain growers of the Don have greeted the First of May with worthy labor achievements. As was intended, they planted early grain and pulse crops in extremely short periods of time and with high quality. They occupy 926,000 hectares. On two-thirds of the area the planting was conducted simultaneously with the application of fertilizers and more than 1.5 million hectares of winter crops were top dressed. The field work must be done under difficult weather conditions. The farmers are demonstrating high mastery and are skillfully maneuvering technical equipment. High labor productivity on the spring fields can be seen on the farms of Peschanokopskiy, Azovsky, Millerovskiy, Bokovskiy, Tatsinskiy, Aavetinskiy and other rayons where the planting of early crops was conducted in 50-70 hours. Success is ensured by comprehensive organization of labor and 24-hour operation of the sets of equipment. These days more than 2,000 tractor-planting complexes and detachments are operating on the fields of the Don area. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 May 80 p 1] 11772

LATVIAN PLANTING--Riga--The report of the first tens of thousands of planted hectares was submitted in Latvia. The grain growers promptly began mass planting, even though the snow remained on the fields longer than usual. Each farm has carefully checked the sections on which the soil dries out most quickly and immediately took technical equipment onto them without missing the best agrotechnical time periods. Having thought out the planting strategy in detail, the farmers intend to complete it earlier than they did last year. Under the leadership of the best specialists of the farms, the work in the fields is being done by about 800 comprehensive technological detachments which are organized according to the Ipatovo method. The experience of past years has helped to arrange a continuous planting conveyer. Coordination among soil cultivation, planting and other specialized teams has been organized everywhere. The drivers of powerful tractors have taken only wide-grasp and combined sets of equipment out onto the fields. They will have to work hard and on two shifts. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 25 Apr 80 p 1] 11772

SPRING FIELD WORK--Saratovskaya Oblast. The Saratov workers have to harvest 10,000 tons of oleaginous soya beans this year. This crop is being raised on sizeable areas for the first time on many farms in Balakovskiy, Yershovskiy, Marksovskiy, and Engel'skiy rayons. Thus special training preceeded the sowing operations. Scientists and specialists of the agricultural institute met directly with the soya raising teams. Farms in Krasnokutskiy, Arkadakskiy, Rovenskiy, Samoylovskiy, Krasnoarmeyskiy, and Tatishevskiy rayons are sowing grain crops and sunflowers at a fast pace and on a high level. In places where the preparations for spring are conducted properly, spring crop sowing, as a rule, takes place simultaneously with mineral fertilizer application. As you know, this agricultural method speeds up field work significantly and has a positive effect on yields. For agricultural workers in the Povolzh'ye this has been a spring characterized by weather conditions which have disrupted the traditional notion of sowing schedules. Exceptional efficiency and maneuverability and a high level of organization and technological discipline have been needed to complete it successfully. [Excerpts] [Moscow SOVETSKAYA ROSSIYA in Russian 17 May 80 p 1] 7990

CORN PLANTING--Moldavian SSR--Comprehensive planting of corn with simultaneous application of herbicides was started by corn growers of the Vinogradar' Sovkhoz-Plant in Kagul'skiy Rayon in Moldavia. As soon as the weather became suitable they were the first to bring sets of planting equipment out onto the fields. The seeds are being place in carefully cultivated and fertilized soil. The soil is then packed with rollers in order to retain the moisture. Sunflowers are being planted at the same time as the corn. Six sets of planting equipment which are combined into three teams are working the fields. The workers' committee sums up the results of the competition daily and announces the winners. The machine operators are striving to complete the planting rapidly and with high quality. [Text] [Moscow TRUD in Russian 23 Apr 80 p 2] 11772

VEGETABLE OIL--Stavropol'--Up to a ton of vegetable oil can be obtained from each hectare planted in sunflowers. This is how much machine operators of the Rossiya Kolkhoz have promised to harvest this year. The plans of the advanced workers were taken as a reference indicator by many farms of the kray: The planting is being conducted by the square-nest method almost everywhere. This year Stavropol' workers are plating one-seventh of the spring fields in sunflowers. The planting is to be completed in a week. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 27 Apr 80 p 1] 11772

SUNFLOWER PLANTING--Kishinev--The planting of sunflowers was completed yesterday by machine operators of Moldavia. One of the main industrial crops of the republic, it occupies 180,000 hectares of arable land. Industrial technology was used for the first time half of this area, so that manual labor is eliminated and mechanical cultivations are reduced to a minimum. [Text] [Moscow IZVESTIYA in Russian 6 May 80 p 1] 11772

MORE SUNFLOWERS--Ordzhonikidze--The farms of the foothill regions of Northern Osetiya have begun mass planting of sunflowers. This season the area planted in this oil-bearing crop is being considerably increased. Seeds of the promising new, highly productive Pervenets strain of sunflowers are being planted in well cultivated and moist soil. [Text] [Moscow IZVESTIYA in Russian 29 Apr 80 p 1] 11772

SUNFLOWER HYBRIDS--From Soviet strains of sunflowers with record amounts of oil content, Romania, France and other countries have isolated very valuable self-pollinating lines for creating highly productive hybrids. One of these hybrids, Start, was recently isolated by selection workers of the Bulgarian Institute of Wheat and Sunflowers. As tests have show, the new hybrid is distinguished not only by good productivity of seeds with high oil content, but also by fairly good resistance to a whole number of dangerous diseases and pests. The Start hybrid of sunflower has been regionalized in a number of zones of Bulgaria. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 15 Mar 80 p 3] 11772

DIFFICULT YEAR--1979 was very difficult. The severe winter and then the drought on a considerable territory of the country had a serious effect on the fulfillment of planned assignments for the production of agricultural products, especially grain crops. But even under these exceptionally difficult conditions we have harvest 179 million tons of grain this year. Many krays, oblasts and republics managed to achieve good results. Farmers of Krasnodarskiy Kray, counteracting the bad weather with efficiency and organization in their work, mastery and shock labor, obtained an average of 31.4 quintals per hectare of spike and pulse crops. They poured 3.5 million tons of grain into the grain bins of the homeland, including 2 million tons of strong and valuable wheat. Grain growers of Northern Osetiya and Dagestan overfulfilled state plans for grain procurements. [Excerpt] [Krasnodar SEL'SKIYE ZORI in Russian No 12, Dec 79 p 2] 11772

WHEAT SOWING FOR SEED--Kurgan--The sowing campaign has crossed the Siberian threshold: the machine operators on farms in the southern part of the oblast have commenced the early sowing of wheat for seed. Fallow and well fertilized weed-free tracts have been made available for this purpose. [Text] [Moscow TRUD in Russian 7 May 80 p 2] 7026

FLAX SOWING IN UKRAINE--Rovno--The farmers in Rovenskaya Oblast have introduced into operations the complete mechanization of flax cultivation work. This has enabled them to overcome successfully the caprices of this current spring period and yesterday they became the first in the Ukraine to complete their sowing of flax. [Text] [Moscow TRUD in Russian 7 May 80 p 2] 7026

MAXIMUM USE OF MACHINES--Ul'yanovsk--The Ul'yanovsk machine operators are utilizing the technical potential of their machines and mechanisms to the maximum possible degree in carrying out the mass sowing of their spring crops. The combining of technological operations is being employed extensively on many farms. [Text] [Moscow TRUD in Russian 7 May 80 p 2] 7026

INITIAL GRAIN YIELDS--Tashkent, 16 May--The grain crops have ripened in southern Uzbekistan. As always, the first to cut down their barley were the machine operators in Surkhandar'inskaya Oblast. The combines have been moved out onto the fields in Angorskiy, Dzharkurganskiy, Sherabadskiy and other rayons. A fine crop has developed this year. The brigade headed by M. Khaliyaron at the Kolkhoz imeni Kuybyshev in Angorskiy Rayon is obtaining 45-48 quintals of grain from each irrigated hectare. Similar yields are being obtained at the Kommunizm and Sotsializm kolkhozes and at the Surkhan Sovkhoz in Dzharkurganskiy Rayon. After they have been harvested, the fields are immediately sown in corn for grain. In a day or two the combines in other oblasts of the republic will be moved out onto the fields. This year the farmers of Uzbekistan have vowed to obtain 3 million tons of grain. [Text] [Moscow PRAVDA in Russian 17 May 80 p 1] 7026

SNOWFALL IN MAY--Unusually cold weather prevailed during the middle of May over a large portion of the European territory of the country. We were informed by the USSR Gidromettsentr [Order of Lenin Hydrometeorological Scientific-Research Center] that sharp fluctuations in temperature occur from time to time during the month of May. Although it is already hot in the southern part of the country at this time, cold weather still continues in the northern regions. The contrasts in temperature bring about rapid movements of air masses, thus allowing cold arctic winds to penetrate through to the shores of the Black Sea and Moldavia, as is presently the case. Air masses which moved down from the Barents Sea currently dominate the skies over Moscow. Thus on 13 May the temperature in the capital dropped to zero and minus one degree and a wet snow fell. Such cold weather has occurred at this time of the month in the past. Approximately six degrees of frost were recorded on 14 May 1919. At times, the cold weather even makes an appearance during the summer, as it did, for example, on 12 June 1899 -- minus two degrees. The cold weather is expected to continue for 2 days and thereafter the temperature will gradually rise, with warm spring weather returning to Moscow. [Text] [Moscow TRUD in Russian 14 May 80 p 4] 7026

SPRING FIELD WORK--Spring sowing work continues on farms throughout the republic. Despite cold snaps and inclement weather, the work is being carried out at a high tempo by technological detachments in Talsinskiy, Kuldigskiy and Ventspilsskiy rayons, where more than one half of all of the spring crop fields have been sown. Many farms in these rayons are already completing and a portion -- have completed their sowing of spring grain crops. The leaders in the sowing work are the farmers of the Talsy Agroindustrial Association. Almost two thirds of all of the spring crops have been sown here, including 84 percent of the grain crops. However the work tempo must still be raised considerably. Thus, on the previous day the area of grain crops sown increased by only 1 percent. Complicated conditions are being experienced in a portion of the rayons in which snow fell. For example, only 14 percent of the grain crops have been sown in Baivskiy Rayon. The caprices of the weather must be countered by a high level of organization, skilful maneuvering of the equipment and strenuous effort. Use must be made of every available opportunity for accelerating the sowing work. The sowing of perennial cover grasses is being carried out in all of the rayons (here again the Talsy farmers are the leaders). A top dressing has already been applied to more than one half of the winter fields. On the whole, the spring field work is being carried out more rapidly this year than was the case last spring. For example, 9 percent more spring crops have been sown than were sown by this same time last year. Nevertheless, the work tempo is still lower than it should be. Less than one half of all of the available tractors are being employed out on the fields. More strenuous effort is required if the sowing work is to be carried out during the optimum periods. The example being set by the leading farms reveals that the course of the spring sowing operations can be accelerated considerably. [Text] [Riga SOVETSKAYA LATVIYA in Russian 6 May 80 p 1] 7026

RICE IN PRIMOR'YE--Vladivostok, 3 May 80--The specialized sovkhozes of Primor'ye have begun the mass sowing of rice. It is taking place basically on new plots in the enterprises of the Prikhankayskaya Lowlands. They were put into operation at the beginning of the season by the land reclamation workers of the all-union shock komsomol building group, which is creating a large rice-farming region in the southern part of the Far East. Sowing complexes have been created in all rice-sowing sovkhozes. Leading machine operators from the kray's cities have come to help. The Primor'ye has decided to give the country a record quantity of grain during the final year of the five-year plan--no fewer than 85,000 tons. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 4 May 80 p 1] 8228

DOUBLE SHIFTS--Ivanovo, 3 May 80--The hum of motors on the oblast fields does not cease. There are 320 mechanized complex detachments working in kolkhozes and sovkhozes. Their goal is to lay a firm foundation for the harvest and to increase grain yield by 4.5 quintals per hectare. The sowing complexes of the kolkhozes and sovkhozes in Ivanovskiy, Sokol'skiy, Zavolzhskiy, Il'inskiy and other rayons are working constantly, in double shifts. Grains and feed crops have received 1.2 million tons of compost more than last year. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 4 May 80 p 1] 8228

CHUVASH GOALS--Cheboksary, 29 Apr 80--The farmers of the Chuvash ASSR have actively joined the fight for a large harvest during the final year of the 10th Five-Year Plan. This year they plan to produce no fewer than 23 quintals of grain per hectare of crops. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 30 Apr 80 p 1] 8228

DOUBLE SHIFT NORMS--Penza, 29 Apr 80--Spring work has come to the fields of the oblast. Without waiting for the readiness of the soil on large areas of land, enterprises are beginning field work selectively. They are seeking out other resources for curtailing the sowing period. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 30 Apr 80 p 1] 8228

CORN CROP IN UKRAINE--Kiev SIL'S'KI VISTI in Ukrainian on 13 May 1980, page 1, carries a 400-word article on the efforts in Kiyevskaya Oblast to grow an abundant corn crop despite this spring's adverse conditions. Corn for grain occupies 60,000 hectares here, of which 20,000 hectares is being grown via the improved industrial technology. Corn growers in Kiyevskaya Oblast are trying for a yield of 45-50 quintals per hectare. Kiev SIL'S'KI VISTI in Ukrainian on 21 May 1980, page 1, carries a 1,200-word article on corn planting in Cherkasskaya Oblast. The growing of corn via the improved industrial technology has been expanded from 2,000 hectares in Cherkasskiy Rayon in 1979 to 20,000 hectares in 10 rayons in Cherkasskaya Oblast in 1980. On hectarage where the new technology is being applied corn growers are trying for a yield of 60-65 quintals per hectare. This will be an important part of Cherkasskaya Oblast's plan to grow 430,000 tons of corn. Corn has been given priority in reseeding part of the winter crops. The sown area is being expanded at the expense of less high yielding spring crops. Thus the area sown to corn is being expanded to 100,000 hectares. [Editorial Report]

FIELD WORK PROGRESS--Stavropol'skiy kray--In spite of frequent rains, the Petrovskiy Kolkhoz "Pobeda" was able to plant sunflowers in the time calculated and the planting of corn covers 1,900 hectares. The majority of the Stavropol' beet-producing and corn-producing farms are completing their planting. The Ipatovskiy method again helped to speed up the process and improve quality. The machine operators and the specialized service shops are struggling to produce the biggest harvest yet in this last year of the five-year plan; to sell more than one million tons of sugar beets and 55,000 tons of high quality seed corn to the state. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1] 9233

WHEAT SOWING--12 May--More than half a million hectares of the oblast--100,000 hectares more than last year,--are sown with wheat. There is competition for the fastest sowing time of grain crops. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1] 9233

OLIVE OIL--Kirovograd, 12 May--Due to industrial technology, the valuable olive oil cultivation covers 35,000 hectares, one-fourth of all cultivated fields. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1] 9233

GRAIN CROPS--Tula, 12 May--The first to report completed sowing of early grain crops were the workers of the largest grain-producing rayon of the oblast, Efremovskiy. Later sowing is being done in Volovskiy, Uzlovskiy, Teplo-Ogarevskiy and other rayons. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1] 9233

CORN PLANTING--Kurgan-Tyube, 12 May--The planting of corn on the farms of the Kumsangirskiy, Shaartuzskiy, Kabodiyonskiy rayons cheers the eye. The workers hoe, weed and fertilize. The work is especially successful where feed production is an independent branch. There are more than 20 specialized brigades in Kumsangirskiy Rayon. The corn-producing rayons are committed to producing 60-80 quintals of grain and 600 quintals of silage. The workers of the Kurgan-Tyubinskiy Oblast have the best harvests of the republic. The irrigated fields here give two harvests. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1] 9233

TIME USED EFFICIENTLY--Lutsk, 28 Apr 80--The oblast's kolkhozes and sovkhozes have completed the top-dressing of winter crops as well as the sowing of early grains. Although spring hindered the movement into the fields, more flax and sugar beets have been sown and more potatoes planted than at the same time last year. Village workers are utilizing technology hourly at a high rate of productivity. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 29 Apr 80 p 1] 8228

CSO: 1824

LIVESTOCK FEED PROCUREMENT

OUTSTANDING ACHIEVEMENTS OF LEADING LIVESTOCK BREEDERS

Moscow TRUD in Russian 22 Mar 80 p 1

[Interview with V.M. Tsybul'ko, first secretary of Kiev obkom, by S. Prokopchuk, TRUD correspondent]

> [Text] For the third time in a row under the current five-year plan, the challenge Red Banner of the CC CPSU, USSR Council of Ministers, AUCCTU and CC of the Komsomol, has been awarded to Kiev Oblast for its achievements in the 1979 socialist competition. The livestock breeders made a sizable contribution to the achievements of the workers of this oblast.
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> S. Prokopchuk, correspondent of TRUD, asked V. M. Tsybul'ko, first secretary of the Kiev obkom of the Communist Party of the Ukraine, to tell about the work of the farm workers of Kiev Oblast.

[Question] Under the last two five-year plans, milk production has increased by 1.7 times, meat production by 1.6 times and egg production by 2.8 times in the farms of this oblast. How did the livestock workers obtain these achievements?

[Answer] There are several circumstances involved here. Stage-by-stage and persistent work is being done in this oblast on specialization and concentration of production on the basis of interfarm cooperation, which is becoming increasingly extensive and yielding positive results: there has been a significant increase in number of cattle, purity and productivity of stock.

Last year, milk production constituted 684 centners per 100 hectares and meat production 135 centners. The livestock breeders of Kiev Oblast fulfilled the assignment of 4 years of the current five-year plan in September of last year with regard to selling the State all types of livestock products. The mean annual sales increased, for example, by 18% for meat, 26% for milk and 52% for eggs.

[Question] What are the objectives for this year?

[Answer] Our plans were determined by the decisions of the July (1978) plenum of the CC CPSU. In implementing them, the livestock breeders have set the following goal: to achieve this year indicators that exceed the level for last year and to fulfill, by the third anniversary of the Constitution of the USSR, the five-year plans for procurement of all types of livestock products, to sell 100,000 more tons of meat than planned, 350,000 more tons of milk, 425 million eggs and 100 tons of wool over and above the planned amounts.

I am sure that the farm workers will reach their goals. But even now, Party, soviet and economic agencies, trade unions, komsomol organizations and all of the working people in this oblast are working to develop a reliable base for accelerated development of the livestock industry in the future as well. It is planned to bring the number of head of cattle up to 1.60 million, i.e., 100 head/100 hectares of farm land, in the next few years.

[Question] Of course, a solid feed base is needed to reach such goals?

[Answer] Definitely. Today's achievements were largely attributable to the fact that the farms are seriously, thoroughly and economically engaged in feed production. A complex program was prepared in this oblast to augment production and improve the quality of feed.

[Question] What is the substance of this program?

[Answer] It is based on steps for intensification of field feed production and increasing productivity of natural feed fields, broad introduction of progressive technology for production, storage and processing of feed. In our region, feed production is becoming a specialized sector. Farms have been created for the production and processing of feed, as well as interfarm enterprises.

Further development of the feed industry on an interfarm basis will proceed on the route of converting mixed feed plants into large combines which, in turn, will become elements of interfarm associations for feed production.

[Question] Is this a plan, or are there already such enterprises?at work?

[Answer] At present, there are nine such associations, and under the 11th Five-Year Plan they will be organized in each rayon. For example, the Polesskoye enterprise was created by 11 kolkhozes and 2 sovkhozes. They transferred to it more than 6000 hectares of floodplains. There are a mixed feed plant, lines of granulated grass and conifer meal, high-power grain dryers and other agricultural technology at the disposal of the association. All of the work--spreading fertilizers, sowing grass, harvesting and processing it, care of perennial pastures--is done by the association's machine operators. In the future, the enterprise will be able to produce over 55,000 tons of feed.

The distinctions of this oblast must also be taken into consideration. Here, all of the land has been plowed, and intensive use of the fields deprives the farms of the possibility of increasing the area used for feed crops; our cattle is kept in stalls around the clock. For this reason, the only means of fully supplying public cattle with feed is to augment the feed yield per hectare.

Experience convinces us that wherever feed production was promoted to the rank of one of the most important sectors of the economy the achievements in the livestock industry are stable and impressive. The Ploskovskiy sovkhoz in Brovarskiy Rayon harvested 1289 centners per hectare of feed beets, 580 centners of green corn mass and 509 centners of perennial grass last year. It is expressly the solid feed base, with a high level of pedigree breeding work, that enables this farm to produce annually more than 2400 centners of milk per 100 hectares of land, with a mean yield of over 5000 kg milk per cow.

Today, the main objective of the rural workers is to carry the cattle over the winter and celebrate in a worthy manner the 110th anniversary of the birthday of V. I. Lenin. They will continue to multiply their achievements in order to successfully end the five-year plan, to deliver more agricultural products to the nation.
[315-10,657]

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CSO: 1824

NEW SOURCE OF LIVESTOCK FEED

Moscow SOVETSKAYA TORGOVLYA in Russian 20 Mar 80 p 2

[Article by Z. Siradzhev, chairman of the board of the Uzbek Union of Consumer Trade Cooperatives: "Our New Industry--Growth of Number of Cattle in Livestock Fattening Farms"]

[Text] In the last few years, there has been marked development of a new area of endeavor in consumer cooperation in Uzbekistan: fattening of livestock at subsidiary farms. This is an important source of increasing meat resources.

In the 180 farms of this republic, the cooperative herd numbers about 100,000 head of cattle, sheep and goats, and 10,000 hogs. In addition, almost 1.5 million chickens and ducks are being raised. Last year, more than 50,000 tons of dressed meat was produced in the livestock fattening farms of Uzbek potrebsoyuz [union of consumer trade cooperatives].

Let us refer to the knowhow of the personnel at the livestock fattening farm of Srednechirchikskiy raypo [rayon consumer cooperative society], in Tashkentskaya Oblast, which instigated the extensively deployed socialist competition among the republic's cooperative workers. This enterprise achieved high results in the production of meat and obtaining weight gains by means of effective use of feed, particularly food scraps [waste], and good care of the livestock. At this farm, the cost per centner of weight gain does not exceed 100 rubles. There, up to 4500 head of cattle are fattened annually, and almost the same amount of sheep and goats. A hog farm has been erected, and three incubators with a capacity of 165,000 eggs have been put in operation.

The brigade headed by Abdurakhim Radzhabov, bearer of the Order of the Red Banner of Labor, has achieved the best results in the socialist competition. Each livestock hand takes care of 80-100 head of cattle, and the mean daily weight gain constitutes 800-900 grams.

The knowhow of this progressive farm has been thoroughly studied and extended to all cooperative subsidiary farms. Moreover, many of the administrators of livestock fattening farms have visited it and become personally acquainted with the progressive technology of obtaining cheap livestock products.

The poultry plant recently created within the Ordzhonikidzevskiy Rayon potrebsoyuz in Tashkentskaya Oblast, where up to 200,000 chickens can be kept at one time, has become a major base for poultry production. At the present time, there are eight such poultry plants under the Tashkentskaya Oblast potrebsoyuz. They regularly deliver many tons of fresh poultry to the stores of the city.

A livestock complex has been developed under the Kuvinskiy Rayon potrebsoyuz, where up to 1000 head of cattle and 2500 head of sheep can be kept at one time. In addition, there is an incubator station and poultry farm.

Serious attention is being given to development of their own feed base. Last year, 8500 tons of coarse and succulent feed was raised on 200 hectares of arable land. Wide use is made of food waste in the diet of cattle.

This serious and rational approach to development of the material and technical base of the new sector is inherent in all potrebsoyuzes. In 3 years, more than 200 livestock buildings were erected, which can hold 30,000 cows and sheep, by the Uzbek potrebsoyuz, using cooperative funds, as well as Gosbank loans. Wide use was made of cheap, local building materials.

There has also been appreciable progress in creating a reliable feed base for these farms. Local Party and soviet agencies provided substantial assistnace in solving the problems of cooperative workers. A total of 12,000 ha of land was allocated to the farms for the production of their own feed. Each year, the consumer cooperative farms are provided with concentrated feed and cotton seed pods.

The board of the Uzbek potrebsoyuz constantly devotes attention to this sector. At its meetings, it hears the reports of oblast cooperative organizations concerning development of cattle fattening farms, analyzes the situation and offers concrete assistance to eliminate any occurring flaws.

Having rated well the performance of cooperative organizations with regard to meat production, the CC of the Uzbek Communist Party and government of this republic has put a task to us: to further expand cattle fattening and increase meat production. All of the local resources will be used to achieve this. But we also need the help of the Tsentrosoyuz [Central Union of Consumer Societies] to supply such farms with agricultural technology, equipment, special transport and machinery. Development of poultry farming makes it imperative to develop our own incubator stations. We shall not be able to solve this problem on our own.

The cooperative workers of Uzbekistan and personnel of cattle fattening farms who have joined in the All-Union socialist competition will do everything they can to fulfill the tasks put to them of increasing the production and sale of meat to the public.
[315-10,657]

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CSO: 1824

COLLECTION OF FOOD WASTE FOR LIVESTOCK FEED

Moscow SEL'SKAYA ZHIZN' in Russian 12 Feb 80 p 4

[Article by V. Zhurkov, head of the Main Administration for Labor and Social Problems of the USSR Ministry of Agriculture: "Stocking Food Waste"]

[Text] V. Korolev from Vladimirskaya Oblast writes: "Previously, we paid 9.50 rubles per ton to collectors of food waste. In 1978, we began to pay them 7 rubles, and now all payments have stopped, and these funds are transferred to the State budget. What is the correct way to make payments?"

Collection of food waste among the public, from trade enterprises and public eating facilities, sanatoriums, rest homes, hospitals, children's and other institutions is an important source for augmenting the reserve of cheap and nutrient feed, particularly for fattening hogs in suburban sovkhozes and cattle fattening farms. For this reason, a material incentive must be provided for waste collectors to advance this goal. The procedure for payments should be as follows.

In accordance with the statute adopted by the USSR Ministry of Agriculture in coordination with the USSR State Committee for Labor, the labor of workers who collect food waste from communal housing and hospitals are paid at the rate of 11 rubles per ton gathered and delivered to livestock fattening farms. The food scrap collector (cleaning person, yardman, etc.) is directly paid at least 9.50 rubles per ton, while the rest of the monies are spent to pay other employees at communal housing facilities and hospitals (supervisor technicians, building [house] managers, etc.) who are directly involved in organizing waste collection.

Additional remuneration at the rate of 3 rubles per ton food waste gathered from trade and public eating enterprises, sanatoriums, rest homes, children's and other institutions is paid to the employees of these enterprises and institutions.
[315-10,657]

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LIVESTOCK FEED PROCUREMENT

LEGAL ASPECTS OF INCREASING QUANTITY, QUALITY OF LIVESTOCK FEED

Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 4

[Article by R. Bogdan-Blakitnyy, deputy head of the Main Administration for Labor and Social Problems, USSR Ministry of Agriculture: "For Quantity and Quality"; column published by the Legal Administration of the USSR Ministry of Agriculture]

[Text] O. Belova, from the Ferzikovo sovkhoz in Kaluzhskaya Oblast writes: "Recently, a decree was published in the press, which is directed not only toward increasing feed production, but upgrading its quality. What steps are provided to advance feed quality?

The recently adopted decree of the CC CPSU and USSR Council of Ministers "On additional steps to increase production of coarse and succulent feed in 1980 and to improve its quality" describes steps to increase feed production and particularly to improve its quality.

The decree recommends that directors of sovkhozes and other State agricultural enterprises make broader use in 1980, in work dealing with procurement of feed, of lump wage payment for work done to complete a job (ton of hay, hayage, silage and other feed) and to make more use of the resources of the material incentive fund as rewards for workers involved in feed production.

It has been deemed purposeful, in determining the lump payment per ton of hay, silage, hayage and other feed, to include a bonus, in addition to the schedule of the wage fund, for quality and time of completion of work, a bonus for gathering the harvest, in order to increase the material interest in procuring high-quality feed and to simplify accounting. The size of the additional payment for quality and time of completion of work, as well as the higher payment for gathering the harvest are differentiated, depending on the quality (grade) of feed. For example, for procurement of first grade feed, the remuneration will be about twice as high as for ungraded feed.

At the present time, the bonus for quality and time of completion of work pertaining to raising feed crops is 1.5 times the regular wages. While the sum of additional payment could not exceed a worker's monthly wages in any 1 year before, now the amount has been raised to the equivalent of 1.5 months of piece-rate [or job-rate] earnings, i.e., as is done for cultivated crops.

There has also been an increase in the higher wages for gathering the feed crop harvest. While the higher payment to tractor and machine operators before 1980 was increased for the first 10 days of mass gathering in farms of Siberia, the Far East, virgin lands of Kazakhstan, the Urals and Povolzh'ye, with the exception of the Non-chernozem region of the RSFSR, by 60%, and in farms of other regions by 30%, at present this increased remuneration is 100% and 60% higher, respectively, provided first and second grade feed is produced. Thus, gathering feed crops is equated in significance to gathering grain and other agricultural crops of the greatest importance.

Settlement must be made with workers of brigades, detachments and units, in accordance with lump wage payment estimates, after delivery and crediting of feed, and in the presence of a document on the results of analysis of feed quality. Before settlement in accordance with the lump wage estimate, one can make payments for labor on a time basis (not by the job), for the time they have worked in accordance with the scheduled wages in sections 3-5. Tractor and machine operators of first and second classes receive a bonus for their class category in the appropriate proportion of the advance given on a time basis.

As before, bonuses for production (at the rate of 125% of the schedule) will be paid to workers after totaling up the amount of feed and other products gathered by the brigade, as well as after completing the most important parts of the work pertaining to incomplete production.

Use of the resources of the material incentive fund, which are avaialble in each sovkhoz, is important to increase the material interest of workers in upgrading the feed. It would be desirable for a specific bonus to be remitted directly for each ton of first and second grade feed, in a differentiated manner according to its nutritional qualities, when preparing the conditions for awarding prizes to workers for procurement of feed.

The directors of sovkhozes and other State agricultural enterprises have the right to award prizes in 1980 to workers for exceeding the mean annual level of production reached in the 5 preceding years, in amounts of up to 30% of the cost of the feed procured over and above this level of production, provided it is of high quality.

It is recommended that kolkhozes use the above incentives, as well as the system of higher pay for gathering and procuring feed that is in effect for sovkhoz workers.

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LIVESTOCK FEED PROCUREMENT

REPORT ON FEED CROP PROGRESS IN SOUTHERN UKRAINE

Moscow PRAVDA in Russian 29 Apr 80 pp 1-2

[Article by A. Kucherenko: "The Feed Crop Fields of the Black Sea Area"]

[Text] The hum of tractors can be heard over the plains of the Black Sea area. Planting is in progress in the south of the Ukraine -- the farms of Odesskaya, Nikolayevskaya, Khersonskaya and Krymskaya oblasts. Seeds of early spring crops, alfalfa and sugar beets are being placed in the soil. The spring was late and the bad weather created difficult conditions on the fields. It will be necessary to plant late crops along with early ones. Farmers have had to adjust their work plans and conduct the planting 24 hours a day. In a situation like this it is important to value each hour and minute, to display good organization and mastery. Many farms are successfully surmounting the difficulties and completing the planting during optimal time periods.

Concerned primarily about increasing grain production, managers and specialists of kolkhozes and sovkhozes assign an important place to fields planted in feed crops. In recent years in a number of southern rayons of the Ukraine the milk yield and the weight gain of livestock have been decreasing. This decrease is especially appreciable in Nikolayevskaya and Khersonskaya oblasts. What is the matter? One of the main causes is the poor rations. And yet there are good possibilities here of creating full-value supplies of forage. More than half of the republic's irrigated land is on the steppes of the Black Sea area and in the Crimea. Large irrigation systems are in operation and others are being constructed, and the deliveries of mineral fertilizers and technical equipment have increased. But the hectares planted in feed crops are not distinguished by generosity. Moreover, the structure of the planted areas is imperfect. Frequently the land is occupied by "traditional" annual grasses which do not guarantee large yields.

Still, there are many farms in the oblast where problems of feed production are being solved successfully. Just take the Kolkhoz imeni Kirov in Skladovskiy Rayon in Khersonskaya Oblast. The fields of the farms spread over broad areas. One after the other, the sets of planting equipment are disappearing into the slightly haze-covered distance.

"We are planting alfalfa," says the chairman of the kolkhoz, Hero of Socialist Labor L. Davydenko. "The crop is irreplaceable. We have been convinced from experience how effective it is."

One has occasion to hear this opinion repeatedly. The areas planted in alfalfa have been expanded recently on many kolkhozes and sovkhozes. As a result, the farmers are creating good supplies of forage, and this is a guarantee of high productivity of the livestock. On this same Kolkhoz imeni Kirov the milk yield from each cow has reached 4,455 kilograms. The young bulls are being released with a weight of 450 kilograms.

There are numerous examples like these. This kind of work is being carried out successfully, for example, in Krymskaya Oblast.

"We are constantly improving the structure of the areas planted in feed crops," says the first secretary of the Krymskaya Party Obkom, V. Makarenko. "We are reducing the areas planted in annual crops and replacing them with perennial grasses. Practice has shown that this is a good policy: in the leading rayons we are obtaining 450-500 quintals of green mass of alfalfa per hectare."

It would seem that there is no need to convince anyone of the value of this crop, or of sainfoin either. In addition to having good nutritive properties, they are excellent predecessors for grain crops. They are also good for all crop rotations on irrigated land. Specialists recommend that no less than one-fourth all the area be planted in perennial grasses, and half of the area used for feed crops should be.

But we are still a long way from this ratio. In Odesskaya, Nikolayevskaya and Khersonskaya oblasts the areas planted in alfalfa and sainfoin are not being increased much this year, and in some places the areas planted in them are even decreasing. For instance, in Novoodesskiy Rayon in Nikolayevskaya Oblast the proportion of perennial grasses has decreased to a minimum -- 3.6 percent of the area planted in feed crops. Many rayons cannot be proud of large yields. And this is because the agricultural agencies and agronomical services of certain kolkhozes and sovkhozes treat perennial crops as something secondary. The level of agrotechnology of their cultivation is low and the time periods for planting and tending the planted areas are not met.

Despite the critical shortage of protein in the feeds, 12-15 percent of the feed land in the south of the Ukraine is given to annual grasses. And yet their cultivation, especially on irrigated land, is an intolerable luxury since they contain only two-thirds as much digestible protein as, say, alfalfa. And their productivity is appreciably less.

Recently party and soviet agencies have adopted many decisions which earmark measures for expanding the areas planted in perennial grasses. But what has actually been done is still inadequate. For example, the farms do not have enough planting material and they must sent "envoys" for it, even to Central Asia. At the same time, on many sovkhozes and kolkhozes and at oblast experimental agricultural stations the production of seeds is still arranged poorly, and they lack the proper control over the correct raising and harvesting of them. And, after all, the south of the Ukraine should not only supply itself with seeds, but should also supply them to other zones of the republic and the country.

It is known that an important role is assigned to the grain forage fields in strengthening the feed base. And there is a great lack of coordination in the structure of the planted areas here. The experience of advanced workers shows that it is necessary to plant more land in corn. On the Black Sea steppes, especially on irrigated land, it produces up to 100 and more quintals of grain per hectare.

"Last year for the first time we used industrial technology for raising corn," says the first secretary of the Odesskaya Party Obkom, N. Kirichenko. "We planted 5,000 hectares of it. And each one produced 67.5 quintals. Moreover, labor productivity increased more than 3.5-fold."

This experience has inspired hope. This year 60,000 hectares in the oblast will be planted according to the new technology. On the whole, the farms intend to harvest an average of 60 quintals of grain per hectare. The farms have prepared carefully for the harvest. The rayons have created more than 300 mechanized teams and detachments that specialize in raising corn. Personnel have been trained, technical equipment has been prepared, and advanced experience has been studied.

Farmers of the Crimea also have achievements to their credit. Last fall they obtained an average of 66.6 quintals of corn from each irrigated hectare. But in Khersonskaya and Nikolayevskaya oblasts the yield of "amber grain" was only half as much. When explaining this shortage, managers and specialists are quite willing to refer to "specific" weather conditions or to the fact that the corn "reacts" poorly to the application of fertilizers. But the detachment of the Khersonskaya master and winner of the State Prize of the Ukrainian SSR, A. Korchinskiy, of the Sovkhoz imeni 60-Letiya Sovetskoy Ukrainy annually obtains 100 and more quintals of corn from each hectare of a large area.

This means that the weather is not to blame for the poor productivity. It is simply that the management and specialists of a number of farms of Khersonskaya and Nikolayevskaya oblasts do not devote enough attention to the dissemination of the practice of advanced workers or to the training of machine operators. Teams and detachments are frequently not assigned to fields planted in corn. They simply "forget" to create them. The possibilities of increasing the yields are not exhausted in Odesskaya or Krymskaya oblasts either. There are still many rayons, kolkhozes and sovkhozes which stand in the shadow of the advanced workers and receive yields that are considerably less than those of their neighbors.

It is possible to make up for the shortage of protein components in feeds by increasing the production of soy beans. Their nutritive value in terms of a number of components is several times greater than that of corn or wheat. This has been observed, for example, on the Odesskaya Progress Kolkhoz where the chairman is Hero of Socialist Labor, N. Myndru. And they have begun to produce soy beans. Last year they obtained more than 35 quintals of soy beans from each of 170 hectares. Now the area planted in them is being expanded considerably.

There is also another example of positive experience. In Krasnogvardeyskiy Rayon they are gathering 26.9 quintals of soy beans from each hectare, and in Krymskaya Oblast as a whole -- 18.6 quintals. This year they intend to increase the areas planted in soy beans more than two-fold. The results are good and it is necessary to reinforce them.

But in other oblasts not enough attention is being devoted to soy beans. In Khersonskaya Oblast, for example, last year they harvested only 8 quintals of beans from each hectare. They talk a lot about producing this crop and they make decisions but they do not do very much in practice. And this year no teams have been assigned to the areas that have been allotted this crop. True, the farmers engaged in the production of soy beans encounter great difficulties. The shortage of herbicides, especially treflan, impedes the introduction of industrial technology for cultivation.

"It is necessary to work on synthesizing complex action herbicides which would destroy all 'enemies' of soy beans," says the chief of the laboratory for the agrotechnology of feeds crops of the All-Union Scientific Research Institute of Corn in Dnepropetrovsk, A. Babich.

The production technology is also imperfect. So far, no special complex of machines is being produced. It is necessary to plant and cultivate the areas and to harvest the soy beans with machines that are not intended for these purposes. So far, technical equipment is being "borrowed" from corn and vegetable growers. In order to increase labor productivity and avoid losses of the crop, it is necessary to have special seeders and combines. Selection workers are also behind in their duties: There are not enough regionalized strains of soy beans. Moreover, they all ripen late. And it is necessary to have a "selection" of three or four strains, especially early ripening ones. Then the irrigated fields of the south of the Ukraine will produce two or three crops a year.

There is yet another extremely efficient crop. I am speaking abour sorghum. On the leading farms they harvest 100 quintals of it per hectare. It produces excellent feed. But here is the problem -- the area planted in this crop is not only not increasing, but is decreasing. In the [illegible]ea, for example, which is supposed to be the supplier of sorghum seeds for other oblasts, in the past 4 years the areas have been reduced from 4,700 hectares to 1,900.

There are many other reserves for feed production in the south of the Ukraine. In the first place, one can expand repeated plantings and minor irrigation. The possibilities of repeated plantings should be taken advantage of more actively. But on the majority of kolkhozes and sovkhozes of the region this is not done. There are many reasons for this. The times for harvesting the preceding crops are postponed and there is a shortage of personnel during the harvest period. Some farms need feed harvesting equipment, especially mowers and silage harvesting combines.

At the July (1978) Plenum of the CPSU Central Committee they set the task of creating a special branch for feed production. Party and soviet agencies of the southern oblasts of the Ukraine have done much to carry this out. Many farms have created brigades, mechanized detachments and teams for producing and procuring forage. A couple of days ago in Odesskaya Oblast they formed an oblast staff which was to take over control of this important branch of agriculture. But they do not approach the resolution of the problem of feed production with the proper attention and responsibility everywhere.

"On a number of farms the feed fields are still not being assigned to individual workers," notes the chief of the Nikolayevskaya Oblast Agricultural Administration, I. Yastreb. "There is one reason for this: Many specialists of rayon agricultural administrations and managers of kolkhozes and sovkhozes underestimate the branch. Hence the low level of agrotechnology, the failure to meet deadlines for various jobs, the poor care of the planted areas, and the lack of control over the quality of the feeds. In certain rayons the level of management of the young branch does not meet modern requirements. In order to introduce progressive technology more actively and to improve the quality of the forage, it is necessary to have intelligent, highly skilled specialists. But there are not enough of them. Sometimes the branch is headed by people who do not know the fine points of raising large yields of feed crops, procuring them and storing them."

The Ministry of Agriculture of the Ukraine has created a special administration whose function is to solve the problem of feed production scientifically, taking the future into account. But it has not become a militant center for the introduction of everything that is new and advanced. And local party, soviet and agricultural agencies do not always display initiative and persistence in the work of creating a stable feed base. They are sometimes hesitant about developing the fields with highly productive crops. And there are immense possibilities of doing this.

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CSO: 1824

AGROTECHNOLOGY OF LEGUMINOUS CROPS

Moscow SEL'SKAYA ZHIZN' in Russian 27 Apr 80 p 2

[Article by N. Chekalin, director of the All-Union Scientific Research Institute of Leguminous and Grain Crops; V. Letunovskiy, laboratory head; and A. Isayev, senior scientist at the institute, Orlovskaya Oblast: "Agrotechnology of Leguminous Crops--Putting Feed Protein Reserves in Action!"]

[Text] It is known that leguminous [pulse] crops are among the main sources of protein for livestock farmers. There is twice as much protein in them as in ordinary fodder grain. In view of this, it is imperative to make the utmost effort in the spring to expand planting of leguminous crops and to create a reliable base for the production of first rate feed.

The largest harvests of leguminous crops are obtained in the Ukraine, central chernozem regions, Povolzh'ye and northern Caucasus. There are quite a few regions there where more than 30 centners of peas, as well as white lupine [Lupinus albus L.] seeds, are gathered per hectare. The conditions for raising leguminous crops are less favorable in the Nonchernozem Zone of RSFSR; however, large harvests of valuable products are obtained there in many farms from year to year. Thus, at the sovkhoz imeni Tsvetkov, Maloyaroslavetskiy Rayon, Kaluzhskaya Oblast, the pea harvest constituted 27-30 centners in the current five-year period.

These examples demonstrate graphically that one can achieve a high yield from leguminous crop fields provided technology is adhered to, and supply the livestock industry with balanced diets, with regard to protein content. But, unfortunatley, this is not yet a goal that is pursued everywhere. Valuable crops are often planted on unfertilized, weed-infested fields, and the schedule for planting and gathering is not followed. Effective enough steps are not being taken to control weeds, diseases and pests.

Such an attitude toward leguminous crops must be radically changed, this very year, when realistic possibilities are being provided for broadening the range of their cultivation. We refer primarily to peas, white lupine, feed beans, vetchling [Lathyrus] and chick peas. Thus far, they are planted over insignificant areas, although the productivity of many of them is quite high.

The white lupine cultivars developed in the last few years, with a grain yield under industrial conditions of 30-45 centners/ha, can be successfully raised in the Central Chernozem Region, southwestern Ukraine, southern part of Poles'ye and irrigated land of Kazakhstan, Povolzh'ye and other regions. Feed beans are notable for their productivity on the fertile soil of the Nonchernozem zone of RSFSR, Baltic region, western Ukraine and Belorussia. Moreover, in these regions, there is no equal to them in protein yield: 9 centners per ha. It is imperative to restore fields of chick peas and vetchling in the areas where they were traditionally raised, as well as such valuable food crops as lentils, in Povolzh'ye, Central Chernozem Zone, Ukraine, and kidney beans in Moldavia and the Ukraine.

Breeders have developed some new, highly productive cultivars of leguminous plants, which have a number of valuable economic indicators. We refer to "neosypayushchiysya-1" [nonshedding], "zelenozernyy-1" [green-grain], "topaz" and "ukosnyy-9" [mowing] peas; "kormovaya-50"[fodder] and "nadezhda" [hope] maple peas; "Orlovskaya-37" and "Omskaya-8" early ripening spring vetch [Vicia]; "solnechnyy" [sunny] and "gorizont" [horizon] white lupine. It is imperative to take steps to expedite reproduction and introduction of these cultivars to production.

In view of the capacity of leguminous crops to make good use of the aftereffects of applying fertilizers, it is best to plant them on intensively fertilized weed-free fields of precursors (potatoes, corn, sugar beets, winter crops). It is also important to make the utmost use of the biological capacity of these crops to fix atmospheric nitrogen, for which purpose it is imperative to provide phosphorus and potassium nutrition. From 20 to 90 kg phosphorus and potassium per hectare are used, depending on the level of planned harvest and soil fertility. The greatest economic effect is obtained when phosphorus fertilizers are spread in the rows at sowing time.

The use of molybdenum fertilizers is also effective, particularly on acid soil. When seeds are treated with molybdenum on soddy podzolic and podzolic soil, an additional 1.2-2.4 centners of grain per hectare are obtained, and an additional 3.6 centners in areas with gray forest soil in central and other regions of our country. In a number of cases, particularly lupine, it is important to use preparations of rhizobium bacteria. It is mandatory to use nitragin in new areas and when there are long interruptions in raising some crop or other.

The opinion that a delay in spring field work would lead to a reduction in harvest of leguminous crops, in particular peas, is not quite correct. There have been analogous conditions many times before. Thus, according to the data of the Povolzh'ye station of the All-Union Scientific Research Institute of Corn, the optimum time for planting peas in Volgogradskaya Oblast was 30 April in 1963, 2 May in 1964 and 19 April in 1965. The harvest constituted 26.2, 20.4 and 18.3 centners/ha, respectively. At the same time, these indices cannot be equated with delay in planting in general, since the harvest diminishes drastically when it is done at a later time. According to the data of State strain-testing centers, a 7-15-day delay in planting, as compared to the optimum time, diminishes the grain harvest, for example, in the Nonchernozem Zone of RSFSR and Belorussia, to 3.2 centners/ha.

Consequently, peas must be planted as rapidly as possible. The seeds are put in the soil at the first opportunity, when it is possible to go out in the fields, within 2-3 days. The same applies to spring vetch. In view of the shortage of sowing material for these crops, the sowing norm can be reduced by 10-15%, which will not have an appreciable influence on the productivity. However, more attention should then be given to chemical methods of protecting the crops against weeds.

When there is rapid temperature rise, it is important to pay attention that the pea seeds are put in the soil at the maximum recommended depth. When the weather is hot and dry, postplanting rolling down of peas and other leguminous crops acquires special importance. This simple procedure provides for retention of moisture in the soil and timely appearance of sprouts.

Weeds can be very detrimental. Tractors with harrows are driven to the fields to destroy most of them. The first trip is made 3-4 days after sowing,. but no later than 2-3 days before appearance of seedlings; they go out a second time after sprouting, at the stage of 2-5 leaves. As a rule, harrowing after sprouting is performed in the afternoon, and the equipment should move no faster than 4-5 km/h.

Harrowing and the use of herbicides, such as prometrin and linuron, provide for more reliable protection against weeds. These products are used before the crops sprout. Tropotox (2M-4KhM) is used at the stage of 3-6 leaves on pea crops as protection against dicotyledonous weeds.

Special attention must be given to organization of pest control. When there is mass scale invasion by bean and pea weevils [Sitonia lineatus] (over 40 specimens per square meter), polychloropinene and metafos are used; metafos or chlorofos are used against pea moths; the seeds are fumigated against "brukhus" [?], and during the period of mass scale swarming of beetles, the crops are treated with chlorofos or metafos.

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CSO: 1824

LIVESTOCK

LABOR ORGANIZATION IN ANIMAL HUSBANDRY IN ORENBURGSKAYA OBLAST

Moscow TRUD in Russian 5 Dec 79 p 2

/Article by P. Inyakin, head of the division of economics of the Orenburg Scientific Research Institute of Agriculture, candidate of economic sciences, Orenburg: "Advantages of Labor Cooperation"/

/Text/ Meat production on interfarm fattening areas has been widely developed on farms in Orenburgskaya Oblast. A total of 287 kolkhozes and 89 sovkhozes now participate in cooperative livestock fattening. A total of 35 interfarm areas--almost in every rayon--have been built with their funds. They give two-thirds of the total volume of meat produced in the oblast. About 70 percent of the delivered livestock is of a high grade.

As compared with ordinary departments all the indicators on fattening areas are much better. The average daily weight gains are 2.1-fold higher and fodder expenditures on kolkhozes are 19 percent lower and on sovkhozes, 35 percent. Labor expenditures per quintal of weight gain have been lowered to less than one-sixth as a result of the high degree of mechanization of labor processes and a more efficient farm specialization.

The advantages of meat production on fattening areas are obvious. However, not everything goes smoothly there. In a number of the oblast's rayons the advantages of interfarm fattening areas are not utilized fully. Whereas high weight gains are attained in Asekeyevskiy, Tashlinskiy, Ilekskiy, Orenburgskiy and some other rayons, they amount to 400 or 500 grams in Tyul'ganskiy, Matveyevskiy, Sharlykskiy, Ponomarevskiy and Sorochinskiy rayons.

The low standard of labor and lack of organization and slowness in the solution of urgent problems--such as the establishment of a firm fodder base, relationships among the participants in cooperation and improvement in labor organization--hamper an efficient utilization of the capabilities of interfarm cooperation in animal husbandry.

Strengthening the fodder base is the most important task. Many fattening areas do not always receive high-quality fodder in a full volume from supplier farms. Practice shows that the farm on whose territory a fattening area is located should itself produce all the fodder for the herd.

Among other farms in the oblast the Kolkhoz imeni V. Kuybyshev in Asekeyevskiy Rayon changed over to its own production of all types of fodder for the fattening area. Grass, silage crops and grain fodder are grown there on large areas. Nutritive mixtures are prepared in the fodder shop in accordance with scientific rations.

The problem of providing fattening areas with young stock meeting high weight requirements is no less important. The terms of delivery of young stock for fattening--periods, age, weight and so forth--are specified in contracts with farms. Firm prices of livestock delivered for fattening have been fixed. It would seem that suppliers are interested in fulfilling all contractual obligations. Nevertheless, in Orenburgskaya Oblast in the last few years the average weight of young stock received in fattening areas has been lowered, which means that the length of fattening has increased.

The optimal forms of labor organization on fattening areas have not yet been established everywhere. The brigade remains the basic production unit on most of them. During the initial period, when the areas were small, that is, for 1,600 places, and eight to ten workers serviced them, the brigade method was the best. Now the areas hold up to 6,000 head. There is more equipment and more farm structures, the number of workers has increased, the nature of their labor has changed and the requirements on their skills have risen. Now a brigade has 20 to 25 people--fitters, electricians, repairmen and machine operators. A brigade leader simply does not have enough time to keep an eye on the farm.

The experience of advanced fattening areas in Asekeyevskiy, Buzulukskiy, Ilekskiy, Adamovskiy and other rayons convinces us of the advantages of the brigade and link form of labor organization. As a rule, links are established inside brigades and groups of livestock for the entire fattening cycle are assigned to workers, which interests livestock breeders in the final results of work.

Owing to an efficient technological and functional division of labor, productivity has increased considerably in links. One worker in a link accounts for 250 to 300 head--twice as many as before. Earnings are also higher. This contributes to the stability of personnel and to an improvement in their skills.

The brigade and link labor organization makes it possible to best join equipment and people in one production process, ensures the most efficient utilization of material and labor resources and contributes to an increase in the production of meat and to a reduction in its costs. In brief, experience is available and it is up to economic and trade organizations to see to it that it is disseminated.

Many other problems of interfarm cooperation in meat production have not been fully solved. For example, there are no satisfactory standard plans for areas of various holding capacities.

Meat production on interfarm fattening areas has demonstrated its advantage in all respects. It is very important to study and disseminate without fail the experience of advanced collectives, to continue to improve fattening techniques and labor organization and to increase the mutual interest of all the participants in cooperation in the economic results of breeding and fattening livestock under conditions maximally close to industrial conditions. All these measures will make it possible to fulfill the task set by the November (1979) Plenum of the CPSU Central Committee--to increase meat production significantly.

11,439
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REGIONAL DEVELOPMENT

DEVELOPMENT OF STABLE AGRICULTURAL AND FOOD BASE FOR SIBERIA

Moscow SOVETSKAYA ROSSIYA in Russian 4, 7 May 80

[Serialized article by B. Lazarev, L. L'vov, and B. Prokhorov: "An Agrarian Base for Siberia"]

[4 May 80, pp 1-2]

[Text] What attracts general attention to Siberia? No, not only the beauty of nature and the stark exoticism. Primarily, it is the scope of the transformation of this immense, rich area. The population is increasing rapidly. All this requires intensive development of Siberia's agrarian base.

How are problems of a unified food complex being solved here? This question began many of our conversations with party and Soviet workers, executives, specialists and scientists of Omskaya and Novosibirskaya oblasts and Altayskiy Kray.

Here is what we heard:

A. Filatov -- first secretary of the Novosibirskaya Party Obkom: It is a large proglem. It is necessary to strengthen all parts of the food complex and we are working in this direction. But we must more purposively solve problems of material and technical support for Siberian agriculture. Without investing money one does not obtain large crops.

I. Ovsyannikov — chief of the Altayskiy Kray agricultural administration: You are probably familiar with the materials of the recent plenum of the party kray committee. Our shortcomings were discussed in them. But still it is necessary to understand something else: we have had a drought for practically 7 years in a row. During some years even the straw for the livestock had to be shipped in from other oblasts.

N. Krasnoshchekov -- deputy chairman of the Siberian Branch of VASKhNIL: Our institutes are conducting research into various directions of the development of the region's agriculture. Many developments and recommendations have been prepared. But they are all related mainly to production.

So far, there are no generalizations about other parts of a unified food complex for Siberia.

Opinions on the problem can vary, of course, but in any case one thing is important here: who sees the potentials of the oblast, kray and the entire region and how; who evaluates the level that has already been achieved in the development of agriculture, and how? The degree to which the plans are realistic and the purposeful action of the collective in the search for and the utilization of reserves depend largely on this.

The ability to see the future and to make the correct calculations is being manifested fairly clearly by many party, soviet and management leaders of Altayskiy Kray and Novosibirskaya and other oblasts of Western Siberia. But it is one thing to see reserves and plan measures while it is another thing to organize the work efficiently and intelligently, to provide for confident fulfillment of plans and commitments -- everything that has been earmarked.

Siberian grain occupies an important position in the grain balance of the Russian Federation. The kolkhozes and sovkhozes of Omskaya Oblast have achieved a marked increase in its production and procurements. While at the beginning of the 1960's the gross yield of grain averaged 1,821,000 tons, under the Tenth Five-Year Plan it was almost 3.5 million tons. And last year Omskaya workers harvested more than 4 million tons. The productivity more than doubled during this period.

But in Western Siberia as a whole grain production has decreased during the past 4 years. Altayskiy Kray, the main grain bin of Siberia, has not only not advanced in the productivity and gross yields of grain, but has even fallen below levels that were already achieved. Under the Tenth Five-Year Plan it annually harvested 850,000 tons of grain less than under the preceding five-year plan. Novosibirskaya workers have also lost ground.

How is this explained? After all, as scientists note, the kolkhozes and sovkhozes of Western Siberia have land with great potential for intensive development of crop growing and, above all, grain farming. The soil in the region is mainly of the productive chernozem type (up to 85 percent), which is capable of producing stable, sufficiently large crops. Nature herself has opened up the way for plowmen to cultivate many agricultural crops. In Altayskiy Kray it is possible to successfully raise not only grain, but also vegetables, potatoes, flax, sugar beets, hops and also fruits.

This has been convincingly demonstrated by the work of the advanced farms. The Zarya Altaya Kolkhoz, which is located in the arid Kulunda, from year to year raises and harvests more than 20 quintals of grain per hectare, crops that are twice as large as those of their neighbors and other farms which are located in similar or better climatic conditions. Each hectare of arable land, meadows and pastures is used efficiently on the Chikskiy Sovkhoz in Novosibirskaya Oblast and the Sibiryak Sovkhoz in Omskaya Oblast. And there are many farms like these in the region.

This means that to blame the rain, drought and other caprices of nature, which certain managers so frequently do that it has become a habit, is not a sufficiently complete explanation for their arrears. If one looks at the figures for the productivity of grain crops in the Altay during the last 9 years one can see how they jump: fall -- rise, fall -- rise. Just like the temperature chart of a patient with a fever.

Of course the party obkoms and kraykom are aware of these figures and analyze them. Some of them are mentioned from the tribunes of plenums or meetings of the aktivs. But the situation remains almost unchanged. Recently there was a meeting of the plenum of the Altayskiy Party Kraykom at which they discussed in detail the shortcomings and ways of eliminating them. A good decision was adopted. But what specifically is being done to implement it? And not only in grain farming, but also in other branches.

We visited the Novoaltayskiy Sovkhoz and were interested in what was being undertaken in order to increase the production and to deliver all the products from the fields and farms to the consumers. The Novoaltayskiy is one of the largest suburban farms which deliver vegetables and animal husbandry products to Barnaul. The head agronomist of the sovkhoz, A. Zvyagintsev, boldly announced that the farmers know their business, they are fulfilling the plan for the procurements of vegetables, and they are raising enough feeds. But some time later it became clear that the cows are maintained on a very slim ration. The amount of hay that is prepared is quite inadequate and sometimes of poor quality, the silage is running out, and there is not even enough straw to give the animals a complete norm of it. They go and request it from their neighbors. Hence the small milk yields. And the production cost of a quintal of milk at the complex -- it is terrible to admit -- exceeds 40 rubles. Each month immense losses are sustained from its production.

Several years have passed now since the dairy complex intended for 1,200 cows was constructed, but the herd is not yet complete. Only 840 animals are kept here.

"We have nothing to feed the animals so why increase their numbers?" the head zootechnician, V. Petrov, asks.

There is an "opinion" about the problem for you, there is the degree of responsibility. Can one really expect, then, that the situation will soon change for the better? Such indifference on the part of specialists is also apparent in another case. Last year rural workers of the sovkhoz raised good cabbage. But because of sluggishness and inefficiency, thousands of tons of strong juicy heads, gathered together into an immense heap, remained that way on the field into winter. The damage amounted at least to tens of thousands of rubles.

No, it is not only the rains and dry winds that impede the work, but most frequently references to them, the lack of demandingness of certain managers and specialists, the lack of organization and weak discipline.

Everyone we had occasion to meet in Omskaya and Novosibirskaya oblasts and in the Altay spoke with a certain amount of pride about the large amount of work that had been done in the last decade by agricultural workers and scientists for fighting against wind and water erosion, and introducing a soil-protection system of farming on millions of hectares.

Yes, a good deal has been done. And it is precisely where this system has been skillfully applied that the crops have increased significantly. In the steppe Kulunda of the Altay, because of the soil-protection complex, when it was introduced grain production increased by 50 percent during 5 years. In Odesskiy Rayon in the Priirtysh'ye area of Omskaya Oblast the productivity increased from 15 to 18.6 quintals from each of 100,000 hectares. The farms of this rayon received guaranteed stable crops even in years with the most difficult weather conditions and it is, as they say, a rayon that always has grain.

Everyone recognizes the advantage of the soil-protection system of farming, which provides for a stable increase in grain production, as well as the need for its introduction. We did not meet a single person who would doubt this. But the entire complex of agricultural measures is certainly not being applied everywhere. Certain of its elements are utilized and others are not. It is a paradoxical situation: there is a lack of system in the system itself. Scientists think that because of this alone Siberians fail to obtain 2-2.5 million tons of grain from their planted areas. And the chief of the Altayskiy Kray agricultural administration, I. Ovsyannikov, a specialist who is quite knowledgeable in this matter, continues to blame the bad weather. But who can deny that it impedes farming? But has it ever been any different? Bad weather has always "interfered" in the work of the plowman and confused his calculations. And the art of grain growing lies in being able to obtain a good crop under any unexpected circumstances. The more so since now the achievements of science actively help to surmount these difficulties. But the real reasons for the failures are different. It is known that fallow which is not plowed under in the autumn, crop rotations that are not assimilated, and the inability to work with fallow fields cause direct losses of the crop. The farms of Western Siberia are still unable to avoid these losses since they are still weak at solving the simplest problems related to the science of farming.

New strains open up large possibilities of increasing the yields of all agricultural crops. In recent years selection scientists have submitted about 80 new strains for testing, 40 of which have been regionalized. These include grain crops, oil-bearing crops, grasses, potatoes and vegetables. But how much area do these promising new strains occupy? In the grain fields, only 20 percent and in the fields planted in grasses -- 12 percent. Thus another chance is missed for significantly increasing the production of grain and other products.

Today the Siberians provide their own vegetables which are locally raised to a greater degree than they did 4 or 5 years ago. But they still do not produce enough of them: in Omskaya Oblast they produce 80 kilograms per capita or 70 percent of the overall need; Novosibirskaya Oblast produces the same amount; and in the Altay they procure per capita -- 25 kilograms of vegetables and 30 kilograms of potatoes, or one-fourth of the norm.

Agricultural and trade administrations of Omskaya Oblast have nothing against talking about how much specialization in vegetable raising has produced. With the creation of the Omichka Association, they say, there has been a revolution in the branch. Most of the production of vegetables is concentrated here now and their production costs have decreased. This is true. But still the production of vegetables in the oblast has not increased, but decreased. Why? Something is askew in the specialization: many farms completely stopped raising vegetables when the association was created. They eliminated this branch for themselves. An abnormal situation arose wherein certain kolkhozes and sovkhozes, for example in Kormilovskiy Rayon, began to send trucks to the city for . . . carrots. Moreover, the farm managers find a "justification" for this. They say that it is more economically advantageous for them to ship vegetables from city stores than to raise them themselves. And nobody will seriously put a stop to such dependence.

Even less attention is devoted to vegetable raising in Novosibirskaya Oblast. During 4 years of the five-year plan the kolkhozes and sovkhozes have not once fulfilled the plan for the production of vegetables and potatoes. A number of rayons do not raise them even though the necessary conditions for this exist and therefore cabbages, carrots, and table beets are sent from rayon cities and villages hundreds of kilometers away. Moreover, the shipment of cabbages and fresh carrots to the stores of Novosibirsk is usually limited in March. But still certain managers have the impression that the problem of vegetables in the oblast center has been completely solved. Apparently this also results from overestimating what has been achieved.

The farms of Western Siberia have the greatest possibilities of developing a meat and dairy animal husbandry branch. The farms maintain more than 6 million head of large horned cattle, more than 2 million hogs, and 4.5 million sheep. An immense herd! But the productivity of the livestock is increasing very slowly and in a number of rayons it is sharply decreasing. For this reason last year, for example, they produced tens of thousands of tons less beef and pork than in the preceding year.

No matter where we brought the discussion around to the reasons for this situation -- in the party obkoms and kraykom, in the agricultural administrations, on the kolkhozes and sovkhozes -- everywhere we heard one reply: there is not enough feed. Moreover, this is given as a convincing argument, as if someone who was supposed to have delivered feed to the oblast or kray had not done so. But, after all, feed does not grow on city asphalt. And one need only analyze the overall situation in order to come up with the following picture: there are not enough feeds and at the same time they are being expended in an amount that is double the norm. How can this be? The fact is that the fattening of large horned cattle, for example in the Altay, lasts 30 and more months instead of 15-18. This shows the extremely low level of the art of livestock raising.

The situation is no better in hog raising. This profitable branch which makes it possible to rapidly increase the production of meat, having reached a good level in the Altay several years ago, has dropped sharply. The number of hogs which previously amounted to more than 750,000 has decreased by almost half during the period of poor feed supply. The number of head has still not been fully restored. Many hog farms have been liquidated because there were supposed to have been specialized farms and complexes constructed which would rapidly increase production. But this increase has not taken place.

We met with the director of the Chumyshskiy Sovkhoz, V. Botov, and asked him to discuss why, with immense expenditures of feeds and labor, hog production is not increasing. It turned out that most of the labor on the farms is manual and the quality of the feeds is poor. The weight gain is extremely low.

The state does not spare funds when it comes to industrializing agriculture and changing the branches over to an industrial basis. Immense amounts of capital investments have been allotted for the creation of animal husbandry complexes in Western Siberia. And there should be a corresponding return. But what kind of effectiveness is there when it takes 10 years to construct the facilities and provide the herd for certain complexes? And the assimilation of their planned capacities takes even more years. For example, the Ozerskiy hog complex in the Altay should have begun to produce meat 1.5 years ago, but it is still under construction. And 1.5 years of operation of such an enterprise means 10,000 tons of pork. The state has not received them. Should someone be responsible for this? Of course, there is a specific person who can and should be held strictly responsible for the damage that has been caused -- M. Malkin, chief of the Altaysel'stroy Administration. But nobody has addressed him yet.

Or another example. The Petrovskiy Sovkhoz in Omskaya Oblast constructed a dairy complex and equipped it well. But because of a lack of the proper supervision the productivity of the herd of cows, from each of which they obtained 4 tons of milk, decreased by 25 percent. And this did not happen all at once. Could the specialists really not have taken the necessary measures on time? The sovkhoz director has now been released, but the matter is being rectified very slowly.

As we can see, there are many reserves for increasing the production of products from the fields and farms of Siberia, but some have just barely been revealed while others have not been touched upon at all. The low level of labor organization, mismanagement and poor introduction of the achievements of science are impediments. Shortcomings in the first section of a unified food complex inevitably affect other sections, even though these sections have their own problems. One of them is the quality of the products.

We shall discuss them in our next letter.

[7 May 80, p 2]

[Text] How are the Siberians' needs for vegetables being satisfied? Two years ago during a trip to the regions of Siberia and the Far East, Comrade L. I. Brezhnev said that the needs of the population for vegetables as well as other products should be satisfied more and more fully through their local production.

A good deal has been done in this area. But far from everything. We visited trade enterprises and were interested in how the consumers' demands were being satisfied. We saw how vegetables, fruits and potatoes are stored and saw whether all of them reach the grocery counters.

The Dary Poley store of suburban Zarya Sovkhoz is located in a modern new building on the left bank of the Irtysh where a large microrayon of Omsk is growing up. The store is well equipped. In the windows are fresh and fermented cabbage, radishes, onions, table beets and carrots. The customers with whom we spoke were satisfied with the service and the policy, but still they expressed a number of wishes.

"We would like to see a wider selection of vegetables in the store," they said. "Potatoes always used to be for sale at this time. But this year for some reason or other they are rarely shipped in and there are not enough of them. One must stand in line."

V. Lomakin, the chief of the city trade administration, heard this conversation. He explained that during the winter they had procured and already sold as many potatoes as last year. But the problem is that more of them were consumed than usual since the private subsidiary farms produced and stored fewer potatoes than ever before. A clear mistake. It is necessary to be able to determine the consumers' demand precisely.

This self-critical admission somehow explains things, but the problem remains unsolved. It would be incorrect to speak of this as an accident, an unexpected mistake. The creation of the Omichka Association in the suburban zone of this city with a population of a million and the development of specialization in vegetable raising have produced great advantages. But they are only partially utilized. Therefore the procurements of vegetables in recent years have remained essentially on the same level. Of all the garden products raised in the oblast, 55-60 percent go to the storehouses, stores and dining rooms. And this is considered an achievement. It was explained to us that there was a time when the volume of procurements did not reach even half of the amount of products produced and during some years they amounted to only one-third of the gross yield of vegetables.

"At one time up to 30,000 tons of unsold vegetables and potatoes went to feed livestock," says the chief of the Omskaya Oblast trade administration, A. Kislitsyn, "and now only 5,000 tons go for this."

Here is the situation: There are not enough vegetables, but still some of them are used for feeding livestock on the farms -- that same white cabbage that one rarely sees in the stores now, during these spring days. Why? There are not enough storehouses and not enough possibilities of pickling and preserving garden products. The RSFSR Ministry of the Food Industry does not have a single enterprise for processing vegetables in such a large oblast of Siberia as Omskaya. As a result, canned borshch, beet soups and and carrot soups are shipped here from the central and southern oblasts of the Russian Federation and from other union republics -- which are sometimes thousands of kilometers away. The state must pay immense transportation expenses. Yet these same vegetables which are raised on Siberian farms do not always find a market.

There is a similar situation in Novosibirskaya Oblast. There are only two canning plants in the Altay: the Povalikhinskiy and Biyskiy. These are small enterprises which cannot process the raw material that is provided by the farms of the local trust of vegetable and potato raising sovkhozes.

"Last year," said the director of the trust, Ya.Dugnist, "we produced the necessary quantity of vegetables according to the agreement with the procurement workers, but not all of them were accepted."

It is not simply that the procurement organizations have been sluggish. They have one small secret. If they accept vegetables from the farms at the end of July, for example, they pay 650 rubles for each ton of cucumbers and if they accept them in August, they pay only 400 rubles. So they try to put off the procurement time. But then the ripe vegetables are late in reaching the consumers. Later it is necessary to sell products that are good but already overripe as substandard. This is to the detriment of the farms and the consumers, but . . . not to the detriment of the procurement workers.

The canning plants do exactly the same thing with the common interests in their striving for commercial gain. Last year they accepted more than 1,300 tons of vegetables for processing from the Altay trust in violation of the agreement.

The plants are poorly equipped and use a lot of manual labor. The managers are "simplifying" the technology. Hence large expenditures and high production costs.

Last year 234,000 rubles were spent on the preparation of canned borshch. But it was sold at a lower price and so 27,000 rubles were lost. The Povalikhinskiy and Biyskiy plants operate at a loss and are always being supported by subsidies just as a person who is ill is supported with oxygen.

It has long been time to place the entire Siberian processing industry on its feet and seriously strengthen its material base for storage.

Yes, Siberia is rich and its capabilities are great. But one cannot approach their utilization only from the consumers' standpoint. It is necessary to conduct the matter in such a way that capital investments actively influence the creation and development of the agro-industrial complex. For example, questions of producing machinery, equipment and fertilizers should definitely be resolved with the same responsibility and expediency as questions of coal extraction and petrochemistry. The capacities of the meat processing industry of the Altay today provide for only three-fourths of the receiving of procured animal husbandry products.

"And, after all, our area," said the secretary of the party kraykom, V. Mishchenko, when speaking at the Siberian conference on social planning, "could extensively develop the production of canned meats and other meat products for long-term storage for the miners of the Kuzbass, the Trans-Baykal area and Noril'sk as well as for the builders of the Baykal-Amur Mainline. Unfortunately, it is still thought that it is more advantageous to ship canned goods in from Central Asia and even from Moldavia and to export Altay livestock for processing outside the area. It is precisely this that explains, to a certain degree, the fact that planning organizations have rejected our proposals for the construction of two meat combines in the Altay area."

Siberian agriculture requires more attention from the point of view of scientific-technical and material support. There is a critical shortage of pipes and heating equipment for vegetable growing on covered areas, a practice which is now developing. The container method of shipping and storing potatoes produces an immense economic effect and they are striving to introduce it as extensively as possible in all zones of Siberia. But there are not enough containers and they are manufactured independently, through the efforts of local enthusiasts and skilled craftsmen.

Another problem is that not all party organizations have a feeling of concern for solving problems of a unified food complex. The activity of the communists of the Altayskiy Kray agricultural administration lacks business qualities and responsibility for the part of the work entrusted to them. The party committee and party organizations of the divisions of the administration, when solving problems, frequently only duplicate economic measures. The party kray committee should, of course, devote more attention to party organizations of the staffs of the administrations, since omissions here are reflected in the affairs of many collectives.

There is yet another powerful force which should move all branches of the region's agriculture. This is science. How does it affect the units of the Siberian food conveyor? During the 10 years of its activity, the Siberian Branch of VASKhNIL has turned into a large scientific and methodological center. One can turn to it with practically any problem: research is being done by 23 institutes, a special design bureau, 17 experimental stations, 65 experimental production farms and about 1,000 doctors and candicates of sciences. Under this five-year plan alone, they have produced dozens of valuable developments concerning new technologies for the cultivation of agricultural crops, for producing the basic animal husbandry products, and for creating highly productive strains of grain crops, potatoes, vegetables and grasses. It has been calculated that the Novosibirskaya-67 strain of wheat alone, which now occupies 1.5 million hectares, provided 20 million rubles in additional income for the kolkhozes and sovkhozes.

But there are still many unsolved problems here as well. How does one achieve a steady increase in yields? How does one arrange feed production? How does one explain the poor productivity of livestock and what must be done first in order to increase it? The problems are serious. Science, of course, gives explanations, advice and clarifications. But life now requires more of it. Scientists are called upon to be not only propagandists of innovations, but also organizers of their introduction, to occupy an active position, and to firmly combine theory and practice. But in practice, unfortunately, there are not many cases like this.

The recommendations of the Scientific Research Institute of Feeds include a broad system of measures for the organization of a feed base for animal husbandry complexes. Where can one see a model of these scientific ideas? Most likely on the experimental farm which belongs to the institute. Therefore we went to the Posevnoye experimental production farm. Its director, Comrade Konakov, was clearly disturbed when he learned the purpose of our trip.

"Actually, it is difficult to talk about good results from the introduction of scientific developments," he noted.

And we were convinced that it would not only be difficult, be even impossible to talk about them. The experimental production farm of the institute of feeds shows how one should conduct animal husbandry. In the dairy complex it is dirty, the feed is thrown around, and it is distributed in unsuitable form. Although feeds are expended in excess of the norm, the productivity of the cows is not increasing, but is decreasing. During the past 2 years the average milk yield from each 1,100 cows dropped by almost 300 kilograms and its production costs increased. Last year alone the losses from milk production amounted to 69,000 rubles. This year the situation is even worse. The farm has been given the responsibility for producing grass seeds. The plans are not being fulfilled.

What is the role of the scientific institution here? Can its recommendations to other kolkhozes and sovkhozes really have any authority if they are "introduced" this way on the base farm? But still the director of the Scientific Research Institute of Feeds, I. Ya. Ovcharenko, is optimistic. When he speaks about the future it is as if he does not notice the fact that today was the future yesterday. After all, during the 10 years of the institute's existence the farms of Siberia have essentially not taken a single step forward in the matter of improving feed production. The institute has still not developed comprehensive recommendations for feed production or for transforming it into a highly intensive branch. It is precisely here that one finds the reason for the arrears in animal husbandry in a number of rayons. In a situation like this, cheerfulness and optimism simply lead to delusion.

The serious imperfections of the scientific institutions of the Siberian Branch of VASKhNIL are also noticeable with respect to other problems. Research into the development of better zonal systems of farming is not being conducted comprehensively. Serious arrears have been allowed in selection and seed growing of certain agricultural crops. Research into soil-protection farming has been unjustifiably halted in certain oblasts. Recommendations regarding other problems are being developed slowly.

Siberian scientists have begun to develop a broad program which should earmark ways of further specialization of institutes and their modes of interaction in solving crucial problems in the development of the region's agriculture. Obviously, research into problems of a unified food complex, as they were designated in the speech of Comrade L. I. Brezhnev at the November (1979) Plenum of the CPSU Central Committee could be envisioned even now in this program for the scientists.

Siberia -- an immense and wealthy area -- has still not revealed all of its capabilities. With the help of science and the efforts of agricultural workers, it will reveal them fully.

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CSO: 1824

UKRAINIAN AGRICULTURAL MINISTER ON LAND RECLAMATION, IMPROVEMENT

Kiev PRAVDA UKRAINY in Russian 1 Apr 80 p 2

[Interview with UkSSR Minister of Agriculture M. V. Khorunzhiy by RATAU correspondent: "Multiplying the Power of the Hectare"]

> [Text] The general plan of utilization of land resources and also the scheme of land tenure regulations for each oblast and rayon were worked out together with agricultural organs by republic scientists and specialists of Ukrzemproyekt Institute. This will make it possible to solve within a single complex the practical tasks of agriculture and territorial development of industry and other sectors of the national economy.
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> The means of achieving this program, which is planned for up to 1990 were requested by an RATAU correspondent to be discussed by UkSSR Minister of Agriculture M.V. Khorunzhiy.

[Minister's initial comment] The development of a general plan of utilization of land resources was due to the accelerated development of agriculture and other important sectors of the economy requiring long-range planning and forecasting. One of the chief tasks is proper distribution of land resources among the sectors with observance of priority of use of the most fertile lands for agricultural production. It is namely about this that Comrade L.I. Brezhnev writes in the book "Virgin Land": "...land tenure regulations are a kind of general plan determining the configuration and character of a farm, the location and size of its fields, meadows, pasturages, places for the construction of the central buildings, water-supply sources and much else that is very important for life and production."

In the long term, the development of the republic's agriculture will be achieved under conditions of most effective use of land resources and high level of development of land suitable for agriculture use. The accomplishment of the proposals existing in the general plan will make it possible to additionally involve in intensive turnover several hundred thousands of hectares of new areas. Through this means and also through the boosting of soil fertility, gross yields of grain, sugar beet, potatoes, vegetables and sunflower seeds will be increased. The volumes of all types of produced products will grow significantly in practice.

[Question] Mikhail Vasil'yevich, but where can these additional hectares be found? The fact is that thousands of hectares are withdrawn yearly from agricultural use for the expansion of housing, industrial and other types of construction and various needs.

[Answer] True, areas for industrial and other national-economic installations are increasing from year to year. But we are not just giving up land. A large amount of work is being done, and this is in the area of recultivation following mining of mineral resources and construction. Each year 15,000 hectares of land are returned to agricultural use. Of these, about half are returned to plowland. For example, enterprises and organizations of Dnepropetrovskaya, Donetskaya, Sumskaya, Chernigovskaya, L'vovskaya and Krymskaya oblasts will return to farms thousands of hectares of restored lands. And, of course, these lands even now have to be taken into consideration in planning of production output.

Moreover, we are doing everything possible to put the most fertile areas to direct use. For industrial and other needs we are setting aside primarily poorly productive lands.

[Question] Clearly, recultivation of lands does not fully solve the problem?

[Answer] Of course, increase of the area of agricultural lands will be basically done through putting to use reclaimed swamps, areas occupied by shrubbery, stony localities, sands, salt flats and other poorly productive and unused lands. The republic, for example, has acquired much experience in fixation of gullies and prevention of the formation of new ones. There have been planted for this purpose more than 500,000 hectares of forest cover. Afforestation of gullies is planned to be continued. Areas are being reduced for farmyards and structures and an open network of drainage canals and field roads. Thus in Chernigovskaya and L'vovskaya oblasts alone, it is planned to rebuild old, mostly technically inferior land-improvement systems which lack water-regulation structures. Here closed drainage will be built, thanks to which agricultural lands will be increased by almost 7,000 hectares.

By accomplishing these and other measures, we are getting each hectare of land to "work" as productively as possible.

[Question] That is, the main course is further intensification of agricultural production?

[Answer] Without a doubt. We see in this our chief direction. On recommendations of scientists, it is planned to increase over the long term the area of clean fallow lands, which naturally will result in a certain curtailment of sowings of fodder crops. But fodder production volume will be made up through increasing productivity of natural fodder fields, the creation of cultivated meadows and pasturages and increased production of forage grain and mixed feeds. And the use of fallow lands will make it possible to obtain large and stable yields of grain crops in the dry rayons of the republic.

In intensification of agriculture, a special role is being assigned to land reclamation, protection of soil from water and wind erosion, chemicalization and other measures. It is envisaged that the area by 1990 of irrigated and drained lands will have significantly increased. Moreover, there will be conducted on large areas liming of acidic and application of gypsum to solonets soils. The use of mineral fertilizers is to be increased: application of mineral fertilizers per hectare of plowland in the republic will go up to 8-10 quintals and that of organic fertilizers--to 10 tons.

In the course of the projected period, it is planned to complete complex mechanization of agricultural production. Yearly deliveries of tractors, combines and other equipment will be increased.

All this will make it possible to successfully fulfill a most important task set by the 25th CPSU Congress--to attain reliable provision of the country with foodstuffs and agricultural raw materials.

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AGRO-ECONOMICS AND ORGANIZATION

ADVANTAGES OF SUBSIDIARY FARMS REVIEWED

Moscow STROITEL'NAYA GAZETA in Russian 12 Mar 80 p 1

[Article: "The Subsidiary Farm"]

[Text] The Russian language has a precise, expansive word -- "to help [podsobit']." It means to assist, to support, to render assistance, and to be a bearing for something. It is precisely this sense that is incorporated in the subsidiary [podsobnoye] farm, which provides assistance in increasing the production of meat, milk, and vegetables. But this task ranks among the most important. At the November 1979 Plenum of the CPSU Central Committee Comrade L. I. Brezhnev said in his speech that providing an uninterrupted supply and producing a sufficient and wide variety of high quality food products are one of the most important goals stemming from the party's course of improving the workers' well-being.

Practice in our branch has proven the effectiveness of this form of improving the organization of public dining. Enterprises of the RSFSR Ministry of the Construction Materials Industry are emerging as leaders in this field. It is of general value that here they are actively adopting the experience of leading collectives. They have reviewed it at the collegium of the ministry; it has been studied at seminar-conferences which took place directly on the better subsidiary farms. A special brochure has been published and distributed everywhere. Here is the result: 3 years ago subsidiary farms were in operation at 20 enterprises, but by the beginning of the current year their number had increased more than 10-fold. Now the collegium has adopted a decision: by 1982 all 420 ministry enterprises must have agroshops.

They will be established mainly through utilization of internal industry resources and reserves, as a rule, without involving state capital investments and funds for feed. Exhaust steam is used to heat the greenhouses; fish are bred in quarries which are not subject to recultivation; their own feed base is to be established by developing unproductive, swampy lands.

Take, for example, the Strizhi Silicate Plant. Using the widely publicized experience of the Pervomayskiy Glassworks, they established an outstanding subsidiary farm here in only 2 years. The hog farm has 400 head (and, what is very important, they organized the reproduction of the stock here). Two greenhouses produce cucumbers and green onions; a fishery has been established in quarry shafts; they have begun to raise ducks and breed rabbits. After the vegetable storehouse was finished, they began to build a cow barn and two more greenhouses. Initiative, enterprise, and purposefulness -- these are the qualities which distinguish economic and trade union leaders at this plant who saw in the establishment of their agroshop not just its productive, but also its social side.

The people of Kurgan are doing interesting work. Such organizations as the Kургansel'stroy Administration, the Kurgangrazhdanstroy Trust, the ZhBI-1 Plant, and others are undertaking shared participation in erecting a hog farm, poultry houses, and a cattle farm and then, on the basis of a contract, they receive a specific proportion of the animal husbandry products for public dining facilities for their collectives. You see, not every construction organization can establish its own subsidiary farm. Hence a survey is needed, and initiative (let us stress this once more) is needed. For example, at the Primorskiy Production Association for Construction Materials they were able to regulate the fattening of hogs so that not only did they satisfy the enterprises' public dining needs, but they also began to sell shoats to individual farms.

The agroshops, as a rule, are advantageous in many regards. They are becoming an important additional resource for improving the nutrition of construction workers and members of their families; they assist in strengthening the cadres and promote the creation of a good microclimate in the collectives. Moreover, subsidiary farms are quite economical. For example, at enterprises of the RSFSR Ministry of Construction Materials the utilization of heat and exhaust steam which go to raise vegetables in greenhouses provided an opportunity to save more than 200,000 rubles in only one and one half years and the utilization of food scraps to fatten hogs saved the state 750 tons of grain and 60,000 rubles.

Fresh vegetables and dairy products produced by the collective of the subsidiary farm of the Magnitostroy Trust are supplied to the dining rooms of construction workers in Magnitogorsk, to children's enterprises, and construction projects at some distance from the city both winter and summer. The farm now has over 2,500 head of cattle, a dairy herd, and several thousand hogs. The covered ground alone produces over 1,000 tons of vegetables a year. The farm sells surplus products to the store. A poultry factory for 500,000 layers is under construction, and there are plans to begin to raise mushrooms and flowers. There are also plans for an overall expansion of the subsidiary farm as a whole. Of course the Magnitogorsk construction workers have both the opportunities and the traditions. But, you see, they too began from scratch. Their scope and bold approach to solving such an important problem can and must be learned by many.

Of course, it is easier to organize a multi-branch subsidiary farm under conditions of stationary production. Although even here there are leaders who shun this matter in every way possible. Enterprises of the construction materials industry in republics which are favorable for the development of subsidiary farms, such as Georgia, Armenia, Kazakhstan, and Tadzhikistan, either do not have subsidiary farms at all or only plan to establish them. The majority of the construction ministries are also not very concerned about the development of agroshops. We can understand their difficulties, but we must not justify their inaction. Moreover, in reference to the largest construction projects in Siberia and the Far East and the remoteness from their home areas, the question of the uninterrupted supply of milk, meat, and fresh vegetables to the workers becomes especially acute.

Trade unions play an important role in organizing this matter. Construction materials enterprises and construction organizations face the goal of achieving complete independence in supplying such products as meat, milk, eggs, and vegetables. Many collectives list among their obligations paragraphs dealing with their participation in subsidiary farm matters. The decision to establish agroshops is included in collective agreements. Those trade unions organizations which have assumed control of all facets of this varied work are acting correctly.

Beginning with this year, the best 100 subsidiary farms will be granted certificates of the ACCTU and monetary awards (up to 3,000 rubles). The USSR Ministry of the Construction Materials Industry and the central committee of our trade union established a transferrable red banner and monetary awards as incentives for the leading agroshops of enterprises. All these and other measures are intended to improve this very important matter given current conditions. It must be resolved rapidly and wisely according to the state method. You see, in the final analysis we are talking about people's well-being.

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AGRO-ECONOMICS AND ORGANIZATION

SUCCESS, PROBLEMS OF SUBSIDIARY FARMS REVIEWED

Moscow SOVETSKAYA TORGOVLYA in Russian 25 Mar 80 p 1

[Article: "The Potentials of Subsidiary Farms"]

[Text] Comrade L. I. Brezhnev, secretary general of the CPSU Central Committee, speaking at the November 1979 Plenum of the party central committee, said that "guaranteeing the uninterrupted supply of and the production of high quality food products in adequate amounts and a wide variety is one of the most important goals stemming from the party's course toward improving the workers' well-being." In connection with this Comrade Brezhnev pointed out the need for a significant increase in meat production.

Enterprises and organizations of the trade and public dining systems can and must make a contribution toward meeting this goal. In 1979 subsidiary farms of the state trade system produced 104,700 tons of pork (live weight). However, the result would have been better if the planned targets for fattening livestock had been met by all the union republic ministries of trade. The Belorussian and Georgian ministries of trade lagged especially far behind. The plan for meat production was met only 53.2 percent by the Belorussian ministry and 55.2 percent by the Georgian. The RSFSR and Ukrainian ministries of trade met their goals better than the others, although not fully. The same applies to the Main Administration of Workers' Supply of the Ministry of Railroads and workers' supply administrations of the Ministry of the Petroleum Industry, Ministry of Ferrous Metallurgy, and the Ministry of Timber and Wood Processing Industry. Among those which failed to meet the 1979 plan was the workers' supply administration of the Ministry of the Coal Industry which had the highest targets among workers' supply administrations and which was one of the first to begin to seriously develop the fattening of hogs on food scraps.

The lagging behind the plan is to a considerable degree the result of unsatisfactory delivery of young animals for fattening by kolkhozes and sovkhozes. However, as inspections have shown, directors of many trade organizations have not been sufficiently energetic and resolute in obtaining the fulfillment of decisions on delivery of young animals adopted by the local agencies. In the Ukrainian and Georgian SSRs they are delivering hogs weighing 90 to 100 kilograms instead of 25 to 70 kilograms to the subsidiary farms for fattening. The feed expended on them is not repaid by a substantial increase in weight gain.

In view of the complex situation with regard to the delivery of young animals, their reproduction on the subsidiary farms themselves is becoming very important. In the fourth quarter of last year trade organizations in Tyumenskaya Oblast had for fattening 34,000 hogs which had been reproduced on the farms. They had obtained 46,000 piglets here in this manner for the year as a whole. The entire herd of porkers was obtained by reproduction on the Berezhnyakovskiy Sovkhoz of the Tyumenskaya Dining Room Trust itself. It was no accident that the 1979 plan for weight gain was met 139 percent by oblast trade organizations.

Subsidiary farms in Novosibirskaya and Omskaya oblasts are successfully reproducing their own young animals. This means that if the matter is given sufficient attention and if a material base is established, it is possible to solve the problem of young animals by one's own means if the need arises.

Serious oversights in developing a material and technical base of hog-fattening farms has had an adverse effect on the meeting of weight gain plans in a number of republics and oblasts. For example, 2 years ago pig-sty covers were in a deplorable conditions in the Mikhaylovskiy and Revdinskiy divisions of workers' supply and the Kamensk-Ural'sk production supply unit in the workers' supply administration system of the Ministry of Nonferrous Metallurgy. However, the construction of new shelters is moving very slowly. As early as 1977 construction was supposed to begin on a pig-sty housing 500 hogs at the Novopolotsk Dining Room Trust in the Belorussian SSR, but work did not begin until the end of last year. Such examples, and there are many, attest to the underestimation of the importance of hog fattening by a number of trade organizations. Still there are those who do learn. Excellent mechanized complexes geared to fatten 10,000 to 30,000 hogs per year have been built in the past 4 years by dining room trusts, associations, and public dining administrations in Gor'kovskaya, Omskaya, Rostovskaya, Chelyabinskaya, Kirovskaya, and Tyumenskaya oblasts, Krasnodarskiy and Primorskiy krays, and the Tatarskaya ASSR. Here the correct path has been taken toward creating precisely the large farms for which the means and resources of the industrial enterprises and trade and construction organizations are being combined.

Effective measures are being adopted to strengthen the material and technical base of hog fattening in the Uzbek and Kirgiz SSRs and in a number of oblasts in the Ukrainian SSR.

The development of hog fattening in the trade organizations system is based on the use of food scraps in the animals' ration. This makes it possible to save a large quantity of concentrated feed, which is in short supply. Therefore, it is important everywhere to organize the collection of all food scraps from the public and from public dining enterprises and to use these extensively for hog fattening. However, there have been serious oversights in this matter. Although farms in the ministry of trade system used 5.1 percent more food scraps for fattening hogs in 1979 than in 1978, the plan for their collection and delivery was met only 91.3 percent. Only the ministries of trade of the Ukrainian and Uzbek SSRs met their plans. Organizations of the ministries of trade in the Moldavian, Turkmen, Azerbaijan, and Kazakh union republics collected even less food scraps than in the preceding year.

The proportion of food scraps in hog rations on ministry of trade farms averaged 49.2 percent overall, but only 34 percent in the Kirgiz SSR, 36.8 percent in the Georgian SSR, and 29.6 percent in the Uzbek SSR. It was especially low on farms in a number of workers' supply administrations: 20 percent for the Ministry of Transport Construction, 21 percent for the Ministry of the Timber and Wood Processing Industry, 26 percent for the Ministry of Ferrous Metallurgy, and 26.1 percent for the Ministry of the Gas Industry.

The fact that things can and must be done differently is demonstrated by the experience of leading farms: the Levoberezhnyy Sovkhoz of the Novosibirsk Public Dining Administration, the Zarech'ye Sovkhoz of the Kirovo City Obshchestvennoye Pitaniye Association, the subsidiary farm of the city of Kagan, Bukharskaya Oblast, Uzbek SSR, and many others where food scraps are fully collected and well processed and where they constitute not less than 60 percent of the hogs' ration. In the process the daily average weight gain for the animals is over 400 grams.

Recently the Collegium of the USSR Ministry of Trade reviewed the problem of organizing hog fattening on subsidiary farms and fattening centers of the ministries of trade of the RSFSR, Ukrainian SSR, and Uzbek SSR and the worker supply administration of the USSR Ministry of the Coal Industry. The decision of the collegium provided for specific measures for eliminating shortcomings and developing to the maximum the fattening of animals on food scraps. Implementation of these measures will permit certain fulfillment of the 1980 plan for weight gain and will provide a considerable additional quantity of meat.

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ADVANTAGES OF SUBSIDIARY HOG FARMS PRAISED

Moscow TRUD in Russian 1 Feb 80 p 3

[Article by B. Gol'dman, director of the Kagan City Trade Office, Bukharskaya Oblast: "It Is Advantageous from All Standpoints"]

[Text] The Kagan City Trade Office (Uzbek SSR) is fattening 10,000 hogs on its own subsidiary farm. The cost of one kilogram of pork is one of the lowest in the country. Public dining enterprises in the town and the culinary shops have a wide selection of excellent quality pork products. How have such results been obtained?

When we undertook this venture, there was no lack of sceptics. They told us straight out: you are out of your field; you will fail completely -- you are trade system workers, not animal husbandrymen.

But the trade system workers were burning with a desire to create a farm. You know, in addition to assisting in the supplying of pork to trade enterprises, success promised obvious, large profits. Plans were made for highly profitable, income-producing production. How could a specialist who knows the fine points of economics and of cost accounting and who comes in daily contact with the problems of meat rations for many thousands of people resist such a prospect?

Thus, the first serious argument for setting up our own large hog farm was the prospect of a stable supply of meat for public dining. The second was cheap feed which had actually been thrown out. You know, quite often we are spendthrifts. There are dozens of public dining enterprises in the city -- dining rooms, cafes, and restaurants, and every one of them accumulates a large amount of table scraps every day. When we added it up, we were startled -- more than 6,000 tons of food scraps a year!

And that is by no means all. The dairy in Kagan constantly has problems with the sale of whey and other milk byproducts. The karakul plant in neighboring Bukhara is looking for a way to dispose of its used barley, which still retains its calories and food value. There is plenty of mash at the brewery. And how much do they write off at the vegetable bases; how much rots afterwards in the dumps where they throw the remains of processed cabbages, beets, carrots, and potatoes?

To make a long story short: all this apparently unneeded produce, costing kopeks or sometimes costing nothing at all, now constitutes 70 percent of the food ration on the hog farm. The other 30 percent is made up of vitamin enriched mixed feed.

The citizens of Kagan built their farm with their own resources, by the efforts of their own construction brigade, using turnover funds. They used discarded boards and beams. But there came a point when we felt that we were running out of or exhausting all our resources. The state came to our assistance and granted a loan of 600,000 rubles. Of course, with a guarantee of rapid repayment in cash from income accruing to the farm.

Fortunately, one of the chief advantages of hog raising is the quick return. The first 300 head of hogs were bought by Kagan citizens in the autumn of 1976; there were already 500 hogs in January of the following year and several thousand by the year's end.

Today there are almost 10,000 animals on the trade system subsidiary farm. After receiving a good profit from the sale of hogs, the Kagan workers began to improve the breed line of their stock. They bought breeding sows of the famous Ukrainian breed which produce 12 to 16 piglets per farrowing from the breeding farms in Donetskaya and Krymskaya oblasts.

The present farm by all accounts can compete with specialized farms of this type. It possesses the necessary summer and winter facilities, pasture areas, a veterinary block, a feed kitchen, and specialized buildings for farrowing and keeping young pigs of various ages.

Former workers in the dining rooms, stores, and trade system bases have gone to work on the farm. There are currently more than 30 persons on the subsidiary farm under the leadership of V. Ushakov, a veterinary doctor. They make good pay -- an average of 200 rubles; they receive bonuses along with the other categories of trade workers, and they get preference in receiving passes to holiday homes and hotels and in obtaining living quarters.

The results of the farm's work are appreciable. The number of animals has increased 12 fold in 3 years. During this time the farm for all practical purposes has not had a single case of the death or forced slaughter of an animal. Currently the daily weight gain has reached 400 grams, and the average weight of animals ready for slaughter is up to 114 kilograms. The cost of one kilogram of pork is one ruble 21 kopeks. The trade system intends to reduce this to one ruble 10 kopeks by the end of the current five-year plan and to 80 kopeks in the future when the herd reaches 15,000 head.

Come to dine in the city's dining rooms, cafes, and restaurants. There are always four or five fresh pork dishes on the menu. Housewives can buy pork ragout, cutlets, breasts, and schnitzel in our semi-processed goods stores. Excellent pork at a list price of one ruble 95 kopeks per kilogram is sold twice a week at four large specialized stores in Kagan. The city trade system has organized the delivery of meat to invalids and veterans of the Great Patriotic War who make up a special account with us. City hospitals and kindergartens use our products.

We cannot say that the trade system has no problems. It is experiencing a shortage of transport facilities; there is no bus to take people to work and back -- you see, the farm is 6 kilometers from the city. We need arable land; the subsidiary farm would like to sow its own alfalfa, corn, barley, and feed beets nearby. We have not yet been able to mechanize the cleaning of the farm -- you see, neighboring kolkhozes are literally howling for the manure from the subsidiary farm; this is excellent fertilizer for the fields. A vacuum cleaner would solve the problem; it would free the farm workers from exhausting labor.

A good beginning makes a good ending. Today the Kagan citizens are establishing a cattle farm -- still small, it's true -- for 300 head near the hog farm. But by the end of the current five-year plan we intend to have a herd of up to 2,000 head. The trade system will have its own beef; consequently opportunities to provide the citizen's tables with a more varied and rich assortment of meat products will increase. In his speech at the November 1979 Plenum of the CPSU Central Committee Comrade L. I. Brezhnev once again pointed up the need for a very quick solution to this problem. It is worth taking time for this matter.

Commentary by O. Bogachev, chairman of the Central Committee Trade Union of Workers in the State Trade System and Consumer Cooperatives

It is an important and responsible task to achieve the uninterrupted supply of food products, including meat, to the public. This was once again underlined at the November 1979 Plenum of the CPSU Central Committee. It is necessary to use all existing resources to successfully and rapidly resolve this problem.

As everyone knows, subsidiary farms of enterprises are an important help in increasing the production of meat, milk, and vegetables. Now such farms are also being created by trade organizations. The experience of the Kagan workers who organized the feeding of hogs on food scraps showed the full advantage and efficiency of this undertaking. The Uzbek Council of Ministers has instructed the republic ministry of trade to establish hog fattening centers at all oblast public dining organizations and to devote the necessary funds to them.

Subsidiary farms of the RSFSR Ministry of Trade are successfully operating in Novosibirskaya, Omskaya, and Kirovskaya oblasts, Krasnoyarskiy Kray, and Tartariya. The Levoberezhnyy Sovkhoz of the public dining administration in Novosibirskaya Oblast increases the pace of meat production each year. The gross weight of the hogs here has doubled since 1970, and the proportion of food scraps in the hogs' diet has increased from 35 to 57 percent during this period. Improvements in the technology of feeding and maintaining the animals and the mechanization of labor intensive processes has made it possible to reduce the cost of one quintal of weight gain from 100 to 73 rubles.

This is only one of many examples. For the country as a whole hog fattening at trade organizations has been organized in seven republics so far. Last year alone these subsidiary farms produced more than 70,000 tons of pork -- almost three percent more than in 1978. This is a sizeable addition to the city dweller's table.

This year hog raising farms under trade organizations will be developed in every way possible. In the Russian Federation they will be increased by 180,000 head, and new farms will be organized under the Khar'kov, Dnepropetrovsk, and Sevastopol' trade networks. Work to establish subsidiary farms under the Kirgiz Ministry of Trade will be accelerated significantly.

Competition for the best work plan for fattening hogs on food scraps has been developed on a broad scale among workers of the subsidiary farms. Currently their proportion in the feed ration has reached an average of 50 percent in the USSR Ministry of Trade and 65 percent on a number of farms. This is a guarantee of lower meat costs.

The practice of developing subsidiary farms under trade organizations convincingly demonstrates their high efficiency and effectiveness and the significant role which they play in providing meat to the public. Therefore, the experience of the Kagan workers and other subsidiary hog-raising farms merits the widest possible application.

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PROBLEMS WITH HERDSMEN FOR PRIVATE LIVESTOCK

Moscow SEL'SKAYA ZHIZN' in Russian 16 Mar 80 p 2

[Article by M. Zarayev: "In Search of a Herdsman"]

[Text] Every villager knows that a good herdsman is something special. He understands the nature of a cow, he makes sure that each cow is well fed and produces abundant quantities of milk, he will chase away the forest animal and he will protect crops from damage by cattle. The writer from Vologodskaya Oblast, Vasiliy Belov describes in his sketches how herdsmen lived on northern forest pastures. He recalls the musicality of their pipes and how they were bargained with at village meetings.

I remembered these tales thousands of kilometers from the villages of Vologodskaya Oblast, in the south of Odesskaya Oblast, where in the village of Zadunayevka I met the local shepherd, Dmitriy Pavlovich Karaganchev. Everything here was different, not resembling northern Russia--the bleached, stone houses of large villages, the forestless steppe that was still being warmed by the warm October sun. Dmitriy Pavlovich offered us salted brynza [sheep's milk cheese] and new grape wine from a flask tied to his belt. He was dressed in a sheepskin jacket with fur to the outside and he had a staff in his hand. He did not at all resemble his Central Russian comrades in profession. Only one thing bound him to Belov heroes--the ancient herdsman's art, a professional attitude toward his work, a deep understanding and love of animals.

A great deal is written here about the herdsmen of public herds. This village specialty is among the respected mass specialties. But those who are entrusted with the private herd remain in the shadows, although it is difficult to overestimate the importance of this figure in village life.

In the Ryazan' Morinskiy Sovkhoz the party committee at a meeting decided to evaluate the possibilities for developing private enterprises. The question disturbed people, and this is why few came to the meeting (which was open). Mechanic Petr Fedorovich Napalkov broached the subject that was on everyone's mind,"Feed can be taken care of. But what about the herdsman? Where will we find him? After all, turns must be taken in shepherding work."

Similar criticism was heard in many villages of the Non-Chernozem Region. It is becoming more and more difficult to find a herdsman for the private herd. Young people are not attracted to this work because it appears to have no prestige. Older people who understand the importance of such an occupation are worried about something else--they want to have a permanent length of service with a pension and paid sick leave. Here work is temporary, just through summer, and although the wages are respectable (in the Morinskiy 45 rubles per head were earned per season) what does one do during the winter? In addition it becomes increasingly difficult to graze because the land is plowed up, there is little free land and it becomes necessary to utilize useless lands, slopes and even ravines. Here cows must be watched rigorously. In other words, everyone is striving for permanent work within the collective with rights and benefits and not for temporary, even well-paid work. As a result, in some villages farmers are beginning to take turns with their private livestock. There is little good in this since people are pulled away from public labor. In addition, not everyone knows how to herd animals properly.

Is there a solution to the problem? Let us return to the experience of Zadunayevka in Odesskaya Oblast. The village is a large one with 700 households. Almost no cows are maintained here, but each household has 3-4 sheep, so that the private herd consists of 2,000 head.

The herdsmen are kolkhoz farmers. During the winter they work in various sectors of public production, usually in animal husbandry. Dmitriy Pavlovich Karaganchev, for example, works as a cowman. When the time for pasturing arrives they move to the staff of the rayon combine of everyday services without any interruption in their length of service record. The combine supplies them with special clothes, pays for sick leave and together with the kolkhoz builds camps and summer houses. The owners of the sheep pay the combine 1 ruble 30 kopecks per head per month. The herdsman receives 1 ruble of this money. Thus, the average monthly wage of Karaganchev is 300 rubles since there are 300 sheep in his flock.

The work is not easy. Animals are grazed on unfit lands, on the slopes of gullies or in the fall when the harvest is in the granaries--on stubble fields, after harvested corn, and on free melon plantations. Nevertheless there is no shortage of herdsmen in the village. Here the attitude towards this work is like that towards any other. There is no difference between those who look after the public and private herds. Both occupations are useful for people and for the state.

The same type of system is in effect in other villages of Artsizskiy Rayon, where Zadunayevka is located.

"Every year our rayon combine on everyday life," says its director Vasiliy Stepanovich Polishchuk, "concludes contracts with 80 herdsmen. We feel that this service is no less important than other forms of services for the village population."

During the same year I visited Kazakhstan. Here the system for rendering the same service differed from the one found in the Ukraine. In 1974 sovkhozes, kolkhozes and other state agricultural enterprises were assigned the organization of pasturing livestock belonging to workers and employees of sovkhozes and to kolkhoz farmers. The enterprises conclude agreements with the population concerning the pasturing of private livestock, select from among their herdsmen those with the corresponding wages, supply a riding horse and the necessary equipment while viewing them as any other workers occupied in public work.

"How is the system working out?" I asked the people of the Tendykskiy Sovkhoz of Gur'yev. A great deal of livestock is maintained here--cows, sheep, camels and horses. No one complains and it occurs to no one that it is possible to pasture private livestock by taking turns. The livestock is dependably cared for.

"In three sovkhoz settlements there are six herdsmen," says the director of the Tendykskiy Sovkhoz, K. B. Bergaliyev. "These are our permanent staff workers."

Recently the RSFSR decided to move in the same direction as Kazakhstan. The resolution of the CPSU Central Committee and USSR Council of Ministers, "On Private Enterprises of Kolkhoz Farmers, Workers, Employees and Other Citizens and on Collective Horticulture and Market-Gardening," allows sovkhozes and recommends to kolkhozes to support herdsmen by compensating them for expenditures for these purposes from the resources of citizens in order to aid the population in organizing the pasturing tof livestock. The system of everyday services, which had performed this service to some degree, has begun to transfer it to agriculture. In the Ministry of Domestic Services to the population of the RSFSR I was shown letters of the oblast executive committees which contained requests about decreasing the service plans of oblast administrations of domestic services in connection with the transfer of services for pasturing livestock to the administration of agriculture. Such documents were received from Krasnoyarskiy Kray and Gor'kovskaya, Penzenskaya and Ryazanskaya oblasts.

Well, a great deal of time has passed and maybe this type of operation has removed the problem and now each village is supplied with a herdsman. I make local inquiries in Ryazanskaya Oblast. The deputy director of the oblast administration of domestic services, M. K. Borzunov reports, "Yes, the volume related to the pasturing of livestock is being transferred to agriculture. It is true that kolkhozes are taking this work upon themselves, but the situation is more complex with sovkhozes. They have a plan of domestic services that include the operation of bath houses, the shipment of hay and wood, the cultivation of private gardens, etc. Adding the pasturing of livestock to this means sharply increasing this plan."

In the oblast agricultural administration senior engineer A. I. Kurtsev, who is involved in domestic questions, was very careful, "Yes, the matter is not a simple one. Measures are being taken. We have given the order for sovkhozes to fulfill the additional volume, to perform the service. But are they performing it?"

I turn to the Shatskiy Rayon Combine of Domestic Services (the Morinskiy Sovkhoz is located in this rayon). There I was given the following information, "We are curtailing the pasturing of private livestock. In 1979 these services are valued at 38,000 rubles; in 1980 they are planned for only 18,000 rubles." Maybe agriculture is still closing this expanding gap in the domestic services to village residents? The rayon agricultural administration could not answer this question and proposed that I turn to the rayon planning commission. The chairman of the commission, V. I. Zhukayev, confirmed the urgency of the problem but honestly admitted that he could say nothing about the transfer of the service to pasture livestock.

It appears that this year again the workers of Morinskiy Sovkhoz will find it difficult to pasture their livestock. Will this be the case only for them?

This type of thing always occurs when practical matters are replaced by inter-departmental arguments. In the final analysis it is not that important which staff of which organization the herdsman of the private herd belongs to, be it the combine or the kolkhoz or sovkhoz. What is most important is that the individual is not a temporary, occasional worker, but a serious professional who knows his rights and obligations as a participant in agricultural production. In Artsizskiy Rayon the domestic combine still cooperates in this work with the kolkhoz and utilizes its people. If this is so, then evidently nothing needs to be changed. And if changes are made, they should not be made only on paper but in reality as well. This must be done more rapidly! After all, it is almost time for the livestock to go out to pasture!

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TILLING AND CROPPING TECHNOLOGY

GRAIN CROP DEVELOPMENT IN ROSTOVSKAYA OBLAST

Moscow PRAVDA in Russian 4 May 80 pp 1-2

[Article by PRAVDA special correspondents M. Kryukov and I. Totskiy, Rostovskaya Oblast: "Whose Spikes Are More Bountiful?]

> [Excerpts] The fields of grain on the Don steppes are enormous. Machine operators have already dressed the winter crops in large areas and more than 900,000 hectares have been sown to spike and pulse seed crops. Many farms have begun sowing sunflowers and corn.
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> In the final year of the five-year plan farmers in Rostovskaya Oblast intended to obtain at least 9 million tons of grain. The time and labor of these farmers, the knowledge of specialists and scientists, and the organizational abilities of rural Communists were devoted to the struggle for a high, stable harvest.

Those that initiated the competition themselves are setting a good example. Farmers in Azovskiy Rayon during the Tenth Five-Year Plan obtained an average yield of from 26 to 30 quintals and they increased the average annual production of grain by 30,000 tons and procurement of grain by 20 percent.

Many Don farms and rayons are capable of operating with good results, they achieve stable harvests year after year, and the mastery of the farmers and knowledge and experience of specialists fight drought. The basis for the success is the high farming culture and accomplishment of all agricultural methods as a complex. But, along with the progressives, separated only by a strip of forest or a settlement road one finds kolkhozes and sovkhozes which lag behind significantly from their neighbors and gather low harvests of grain crops. But overall throughout the oblast, as analysis shows, the yield level brings to mind a clock pendulum. Thus, in 1975 Don farms on the average per hectare got 18 quintals of grain, 21.3 quintals in 1976, 18.6 in 1977, 25.5 in 1978, and only 10.6 quintals last year. There need be no mention of guaranteed production of grain yet. It has been noted that over the past 9 years the difference between the maximum and very lowest yields was 15 quintals per hectare.

This did not go unnoticed and was not overlooked by agronomists, economists, scientists, party, and economic workers. Notes of alarm were expressed in their speeches at meetings and at scientific practical conferences. Their conclusion is that the instability in the Oblast's grain economy is caused by a multitude of reasons. Objective and subjective reasons.

Of course, one can never avoid unfavorable climatic conditions and dry winds. But, it is possible and necessary to avoid individual changes in the structure of the sown areas on many kolkhozes and sovkhozes which does not permit the mastery of rational seed fallow row-crop rotations and violations of farming practices and working periods.

Often even during the autumn period the sowing is done by "happenstance." They plant the seed after a poor predecessor in dry soil. They do not rely on good seeds, but the plan for sown areas is "up to snuff." But wouldn't it be better for workers in the oblast planning and agricultural organs to ask experienced farmers for advice on how to do better?

"They send the plan down to us," said A. Bgdikyan, chairman of Pravda Kolkhoz, Yegorlykskiy Rayon. "Plant! So we plant. Last autumn, for example, 3,300 hectares were planted to winter crops, and during the spring we replanted approximately 600. Who needs that? They wasted the grain for nothing although they knew that the sowings would not support the winter crop. They sowed them to spike crops for the third or fourth year running. In farming it's a sin to deceive yourself but even more so to deceive the land."

No matter who we spoke with--scientists, specialists, party workers--they all were of the same opinion: for the dry Don steppe pure fallow land is the fundamental and obligatory element of field crop rotation. They supported their arguments with convincing examples quoting from last year when it was dry. The heartless heat then literally singed the sowing. But at the same time the harvest from the fields in Zernogradskiy and Sal'skiy rayons sent grain to the state storehouse. Does this mean that they escaped the drought?

"Not a drop of rain for three months," relates I. Nazarov, first secretary of the Zernogradskiy party raykom." "We rescued the winter crops sowed in well-worked and fertilized fallow lands. And they provided grain. We realized before that you don't get a high stable harvest in the dry zone without fallow lands. We requested that the agronomists from the farms seek out ways to permit a reduction in the area of low-productivity crops and expand the fallow fields. They facilitate accumulation of moisture, destroy pests and weeds, and in the autumn you get good seedlings. In 1978, for example, we averaged 49.8 quintals of grain per hectare from sowings of winter wheat displaced over fallow fields encompassing an area of 32,000 hectares."

"In order to achieve stable harvests and fully utilize the potential capabilities of new types of wheat," said I. Kalinenko, corresponding member of the VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin], "it was necessary for the oblast's farms to have a great deal of fallow land. This makes it possible to significantly increase the annual guaranteed wheat crop."

Expanding fallow fields is only a portion of the problem. First, fallow land is only one of the elements of the farming system which ensures a stable harvest. Second, they must be maintained in model fashion. However, this sometimes does not happen. Fallow lands are not economically looked upon everywhere. For example, 35,000 hectares put to fallow land since autumn of last year on the farms in Zavetinskiy, Bokovskiy, Kasharskiy, Dubovskiy, and Konstantinovskiy rayons remain unplowed. Individual sections of fallow land at Primorskiy Sovkhoz in Azovskiy Rayon, at Sovkhoz imeni Voroshilova and Moskovskiy Sovkhoz in Tselinskiy Rayon, and Krasnyy chaban Sovkhoz in Zimovnikovskiy Rayon are so overgrow with weeds that they must be replowed. Consequently, fallow lands only are effective when one is able to work them and when the entire complex of agrotechnical methods of raising grain are employed. Economic organs must not only advocate fallow lands, but also deal more strictly with individuals who have an indifferent attitude toward them or who poorly use the land.

Almost 3 million hectares of arable land has been subjected to erosion on the broad Don Steppe which is often subjected to strong winds. A reliable barrier in its path is a soil-protection system of farming and surface treatment of the soil. This not only protects the fields, but also facilitates raising their productiveness. Two years ago on Kolkhoz imeni XXII parts"yezda in Sal'skiy Rayon and Pravda Kolkhoz in Morozovskiy Rayon the harvest of winter wheat planted following surface treatment exceeded the yield of grain from plowed fields by 7-12 quintals.

It is no accident that scientists and specialists are recommeding surface treatment of the soil for the winter crops on a million plus hectares. But the scale of use of this progressive technology is significantly less. What is delaying its implementation? Until the present several farm leaders and specialists accustomed to seeing the mouldboard plow in the field underestimate the new progressive method of soil treatment, while party committees in a number of rayons are content with a similar outlook. In addition farms lack the soil processing weapons--disk harrows, sharescufflers and disk tillers, and spiketooth harrows. Thus, there are 3,000 cultivators and subsurface cultivators in the oblast and we need 6,500, there are 700 heavy disk harrows on the farm and we need about 4,000. Orders for these mechanisms and machines continue to remain unsatisfied.

On almost every kolkhoz and sovkhoz that we visited the field technologists complained that they did not receive enough mineral fertilizer. There actually was not enough to make up for the losses of nutrients taken up by the harvest. But there is the capability on the farms to accumulate more manure and distribute it at not less than 3-4 tons per acre. This level has already been achieved in some areas. Last year a hectare of arable land received 4 tons of organics in Orlovskiy and Neklinovskiy rayons, while those in Myasnikovskiy, Zernogradskiy, Yegorlyskiy, and Chertkovskiy rayons received 3 tons. But, on the average throughout the oblast a hectare receives a scarce amount of fertilizer--it receives only about 2 tons of local fertilizers.

Irrigated lands might serve as a good aid in the struggle for a high, stable harvest. Their area exceeds 400,000 hectares. They make a weighty contribution on progressive farms. However, average product yields are small. The culture of the irrigated field is low, a type of low-yield sort is planted in them, and fertilizer is poorly utilized. Also, approximately 30,000 hectares remain unirrigated annually. It is difficult to achieve a guaranteed harvest given such an attitude to the insurance field.

The farmers of the Don have many reserves for improving the effectiveness of the grain economy and obtaining stable harvests. It is important that they be used fully. In the competition for the bountiful Don spike begun at the initiative of farmers from Azovskiy Rayon and from Gigant Sovkhoz includes 2,400 brigades and departments, of which more than 900 intend to obtain more than 32 quintals of grain per hectare. In their labor in the spring field they are putting forth full effort trying to bring the cherished goal closer.

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TILLING AND CROPPING TECHNOLOGY

GRAIN PRODUCTION OBLIGATIONS OF MINISTRY OF AGRICULTURE FOR BASHKIR ASSR

Moscow PRAVDA in Russian 11 May 80 pp 1-2

[Article by A. Petrushov, Bashkir ASSR: "From the Ministry To a Brigade"]

> [Text] The Bashkir ASSR land is beautiful in its spring attire. The groves and oak forests are turning green in color and the meadows and arable land are springing back to life. Field work is unfolding in all areas. This year it is being carried out by more than 1,400 mechanized complexes. The workers on farms throughout the autonomous republic have undertaken the task of obtaining 6.3 million tons of grain during the final year of the five-year plan and supplying the granaries of the homeland with 2.4 million tons. In the campaign to bring in the harvest and achieve high final results, a considerable contribution must be made by the services of the system which administers the branch, the partners of the farmers. In particular, a great role must be played by the republic's Ministry of Agriculture. It must display concern for improving the forms and methods for organizing and motivating labor, propaganda and the introduction of scientific and practical achievements and it must furnish constant assistance to the production workers. How are these obligations being carried out?

At the Kolkhoz imeni Karl Marx in Chekmagushevskiy Rayon, we met with Vadim Ivanovich Gnedin, the chief of the Department of Seed Production. He was standing at the edge of a sown tract of land and explaining to the chief of the tract, Ayrat Yusupov, how to tend the seedlings of Nosovskiy-9 barley, which had been sown here for the very first time.

"I come here almost every spring" stated V. Gnedin, "It is a seed production farm and it propagates elite seed. Such promising varieties as Chulpan winter rye, Moskovskaya-35 spring wheat and Astor oats are sent out from here to fields in this and other rayons."

During these spring days, other workers from the ministry are going out onto the fields. They are furnishing assistance in improving the agricultural practices and the structure of the plantings. Special concern is being displayed for the foundation for both the present and future harvests -- the seed.

There was a time when the leaders of a number of farms and the agronomists traveled extensively throughout the country. Fewer such trips are being made at the present time. Nor is this the result of there being reduced interest in new developments. The ministry and its services, together with local organs, have accomplished a great deal aimed at improving strain renovation work and placing seed production on an industrial basis. The production of seed of high reproductions is now being carried out by experimental farms of scientific-research and educational agricultural institutes. A network of specialized kolkhozes and sovkhozes has been created. The path traveled by a variety from a plot to the field has been shortened.

In the office of the republic's Minister of Agriculture, A. Aminev, there was a colorful diagram showing the growth in cropping power. Grain production in the Bashkir ASSR is increasing. During the past 4 years, the kolkhozes and sovkhozes sold almost 9 million tons of grain to the state -- 76 percent more than the figure for the previous five-year period.

The services rendered by the ministry here are unquestionable. For example, let us take Chulpan winter rye. It became acclimatized to the conditions found in Chekmagushevskiy Rayon. For practically 3 years, this non-lodging and highly productive variety was sown on one half of the republic's rye fields. And in all areas it is producing a worthy increase in yield. Such wheats as Moskovskaya-35, Khar'kovskaya-46, Saratovskaya-36 and others have also been given the "green light." This year, highly productive varieties will be grown on 654,000 hectares and occupy two thirds of the spring crop fields. Considerable contributions towards renovating the fields have been made by such agronomists as Yu. Moryakov in Baumakskiy Rayon, F. Vil'danov in Blagovarskiy Rayon, F. Biktashev in Chisminskiy Rayon and N. Aksakova in Aurgazinskiy Rayon, all of whom work in close collaboration with the ministry's specialists.

Utilizing the best experience available, the republic's Ministry of Agriculture constantly displays concern for raising the fertility of the land. For example, last year the kolkhozes and sovkhozes applied more than 6 million tons of organic fertilizers to the fields and this year -- almost 8 million tons. The effectiveness of use of the mineral fertilizers has been raised. A qualitative evaluation of the land has been completed. A review of the work -- a 2-volume work entitled "Pochvy Bashkirii" [Soils of Bashkiriya] and evaluation maps. They aid the farmers in making better use of their land. A great deal has been accomplished by specialists of the ministry and the rayon administrations with regard to introducing the Ipatovo method for organizing labor into operations on an extensive scale. Here is how the chairman of the Chekmagush Kolkhoz imeni Karl Marx S, Idrisov, evaluates it.

"In the past, the sowing of early grain crops required a week or more of our time. Today we can cope with this work in just 100 hours. And each day saved represents an increase in yield."

Nevertheless, that which has already been achieved is not viewed as a maximum limit. Great differences in cropping power still prevail throughout the republic and the difference between what many farms are supplying and what they are capable of supplying is still great. Dozens of kolkhozes and sovkhozes are obtaining 4-9 quintals of grain per hectare and miserly yields for their technical and forage crops. It is the responsibility of the specialists attached to the ministry and to the rayon agricultural administrations to ascertain the reasons for their having fallen behind and to define methods for strengthening the economy. One such example is sufficient to underscore the importance of timely and qualified assistance. Several years ago, Kaltasinskiy Rayon was numbered among the backward rayons. Here the production of grain and feed had decreased. A reduction had also taken place in the productivity of animal husbandry.

A group of workers from the ministry paid a visit to Kaltasy. Together with the farm and brigade specialists, they studied the situation. It turned out that one of the reasons for the rayon falling behind was the shortage of experienced middle echelon personnel. The ministry furnished assistance to the kolkhozes in the selection and training of brigade leaders and farm managers. And this produced results. The Kaltasy workers are gradually restoring order to their fields and they are coping with their plans for supplying the state with animal husbandry products.

But it is not too often that such facts can be cited in the ministry. More often than not, the ministry appears to shy away from those concerns considered to be most vital to the production workers.

"When I was invited to work in the ministry, I thought that I would be taking part in active work. Alas, my hopes were not justified. Meetings, conferences, memoranda and reports. There simply was not enough time."

Such was the comment I overheard many of my co-workers making, individuals who, in their own words, had become "paper prisoners." During the past year, 1,114 orders, instructions and reports were issued from Ufa to the Zianchurinskiy Rayon Agricultural Administration. Yes and 948 papers were dispatched from the latter point. Do practical workers derive much benefit from such "work"?

"During the year" related the chief zootechnician for the Zianchurinskiy Administration, R. Abdullin, "I visited the farms and brigades on only about 10 occasions. The remaining amount of time I spent composing memoranda or traveling to Ufa to deliver reports."

Similar statements were made by the administration's agronomists. Meanwhile, reports are being received from fields in Zianchurinskiy, Blagovenshchenskiy, Tuymazinskiy and certain other rayons concerning problems that the sowing conveyer line teams are encountering in their work, violations of the agrotechnical practices and clumsy use of progressive agricultural methods. And the skilled specialists are engaged in composing memoranda.

As you can see, this "creativity" is costly. As a result of it, the specialists do not have time to investigate thoroughly the problems of the branch or to take note of and employ new developments in a timely manner. Moskovskaya-35 wheat, which is praised highly throughout the republic, was regionalized only 2 years ago. However, it was earlier grown extensively on farms in Ilishevskiy Rayon, with high yields being obtained.

Permit me to cite still another example. The agronomists in Meleuzovskiy Rayon employed a pre-sowing treatment for corn seed which involved the use of special preparations. Nor did they learn about this method from workers attached to the Ministry of Agriculture -- rather from newspapers and magazines.

The field of activity for the ministry and its subordinate services is extensive and there are many unsolved problems. Almost 70 percent of the land in Bashkiriya is subject to water and wind erosion. On the average, a hectare of arable land loses approximately 8 tons of humus annually and the damage caused by such losses is measured in many millions of rubles. The solution for this problem is well known: a soil-protection system. But the use of such a system was delayed this spring owing to the fact that certain farm leaders failed to attach the proper degree of importance to this work. If the branch staff will not assist the farmers in acquiring a thorough understanding of the need for new agricultural methods, then who will? As you can see, sufficient time simply is not available for carrying out the most important task -- introducing scientific achievements and leading experience into production operations. Last year the plan for mastering new innovations was not fulfilled in terms of 36 important themes.

The board of the ministry recognizes these shortcomings. On more than one occasion, for example, discussions were held here on those problems concerned with raising the creative activity of the specialists. And the results? Just as in the past, they still lack personal creative plans and the work of the branch departments is being coordinated in a very weak manner. Nor have any improvements been realized in executive discipline. Work has commenced within the ministry in connection with composing a plan for introducing progressive technologies and methods for organizing labor in field crop production and animal husbandry for the Eleventh Five-Year Plan. The draft plan was circulated to all of the subordinate services for the purpose of discussion. The most undisciplined individuals turned out to be the ministry's workers. Many branch departments have still not submitted their own recommendations in this regard.

There would have been fewer blunders if the party organization, which numbers 248 communists, had exercised greater control over the work of the administration. However, current and at times matters of a secondary nature are as a rule discussed from time to time during the meetings, with solutions being developed which are often general and declarative in nature. No action is taken by the commissions of the party committee. The reports of the communists concerning production and social activity are listened to on a case by case basis. Meetings of the party committee are only rarely attended by leaders from the ministry. The party organization participates very little in personnel selection and placement work.

The oblast party committee and the republic's Council of Ministers are aware of the ministry's shortcomings in operational style and methods. It is often criticized here, with the recommendation being made that it participate more in carrying out organizational work directly in the rayons and at the kolkhozes and sovkhozes. But proper exactingness is still not being displayed. Moreover, numerous memoranda, summaries and other "papers" not required by state bookkeeping are at times being prepared based upon instructions received from local party and soviet organs.

Field work is in full swing in Bashkiriya at the present time. While completing their sowing of early grain crops, the farmers are at the same time planting their sugar beets, sunflowers and forage crops. The workers attached to the Ministry of Agriculture are sharing their concerns for the harvest with the machine operators and specialists. The party and soviet organs throughout the republic must display concern for ensuring that the links between the ministry and the production workers become stronger and that more effective and productive assistance is furnished to the rural areas.

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USSR REPORT

AGRICULTURE

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MAJOR CROP PROGRESS AND WEATHER REPORTING

STATUS OF CROP PROGRESS, WEATHER CONDITIONS REPORTED

Weather Delays in Kazakhstan

Moscow IZVESTIYA in Russian 12 Apr 80 p 1

[Article by G. Kasenov, IZVESTIYA correspondent for the Kazakh SSR]

[Text] This spring, declared K. Kalykov, secretary of the Talgarskiy party raykom of Alma-Atinskaya Oblast, has forced several changes in the work plans of agricultural workers. Oriented to the familiar time frame of past years, they had taken equipment directly to the sites of field operations on most farms at the beginning of the second decade of March. Frost came again, however, and the first field work did not begin until 24 March and then, two days later there was a copious snowfall. After waiting another two-three days, they were finally able to begin planting.

Planting is now intensively underway at farms in the Enbekshikazkhskiy, Illiyskiy, Dzhambulskiy, Kaskelenskiy and Kurtinskiy rayons of Alma-Atinskaya Oblast. The Chiliskiy and Balkhashskiy rayons are ready to begin. The mountain rayons, Kegenskiy and Narynkolskiy, will be underway shortly. Work on corn and potato plantings has been started in the piedmont regions.

Planting has also been intermittent in the other southern regions of the republic, in the Dzhambulskiy, Chimkentskiy and Taldy-Kurganskiy rayons. More than a thousand mechanized teams are operating here altogether. The characteristics of the current planting operations for the southern oblasts of the republic have been largely determined by the regular rains and, occasionally by frosts. They are delaying operations. At the same time, plentiful soil moisture gladdens the farmers and allows them to hope for a good harvest on the unirrigated land.

While the readiness of planting technology in the southern oblasts can be considered satisfactory on the whole, it is impossible to ignore the disturbing situation with K-700 tractors whose maintenance (both capital repair and restoration of individual units and combinations) has been entrusted totally to enterprises of Goskomsel'khoztekhnika. The Atbasarskiy plant did not return 36 engines and 19 fuel pumps to the farms of Alma-Atinskaya Oblast from repairs in March. This was equivalent to having almost 60 powerful "Kirovets" unavailable for use in planting operations. There have been a number of complaints by farms in regard to the quality of the maintenance work of the Chuyskiy plant within this same system. The situation in Taldy-Kurganskaya Oblast is even worse where more than 250 K-700 tractors are out of service on farms, 130 engines and 100 turbo-compressors have not been returned from repair and 30 inoperable tractors have simply been abandoned on the farms because repair plants have refused to take them due to a lack of spare parts.

Planting in the south of Kazakhstan is by nature a test of the readiness of technology that will soon be put to work in the major grain regions of the virgin lands in the oblasts of Central, Western and Eastern Kazakhstan. Drawing the correct conclusions and learning the lessons of experience in planting in the souther part of the republic is one of the primary tasks of local soviets and administrative organs today.

Planting Operations

Moscow TRUD in Russian 12 Apr 80 p 1

[Brief article, "Planting Operations Underway" noting problems and progress in specific areas]

[Text] Azerbaijan SSR. Farmers in Azerbaijan have already finished sowing cotton on 100,000 hectares — almost half the cotton sector.

Frunze. The potato farmers of Kirgizia have left for the fields. In order to make up for time lost as a result of rainy weather, it was decided that planting would be done solely by the Ipatovskiy method.

Approximately twenty mechanized complexes are working in two shifts. At present because of the increase in agricultural crops, the expansion of fields and the planting of high-yield varieties, the farmers of the republic have made a commitment to sell the state 80,000 tons of potatoes which is 15,000 more than at the beginning of the five year plan.

Belgorod. The kolkhozes and sovkhozes of Belgorodskaya Oblast have prepared their entire technology for operation. They must plant about a million hectares of spring crops and top-dress winter crops on an area of 600,000 hectares. All the equipment consigned to major planting complexes must operate in two shifts.

Progress in Rostovskaya Oblast

Moscow IZVESTIYA in Russian 15 Apr 80 p 1

[Article by V. Goncharov, freelance correspondent for IZVESTIYA]

[Text] Having finished the final preparations for planting, the workers of the Don lands are awaiting the desired time when it will be possible to go to the fields. The oblast party organization and local soviets have established a goal for the farmers: to produce 9 - 10 million tons of grain during the Lenin Jubilee Year.

Spring is now extremely late. This has produced a noticeable shift in the dates for field operations. People are not sitting idle, however. The workers at the Tselinskiy elevator have finished the job of grading 700 tons of seed corn by size ahead of time. They have also prepared 7,000 tons of sunflower seed in good time so that not only local farms are fully assured of good-quality planting material but a sizeable quantity is also being shipped to many kolkhozes and sovkhozes in the oblast.

Teams are now successfully working on fertility. They are intelligently and economically using mineral fertilizers and have applied almost 348,000 tons or 104 percent of the plan on the Dons's farms from the first quarter's stock. Bases of Rossel'khozkhimiya also supply nitrogen, phosphorous and potassium fertilizers. In the Salskiy rayon, for example, they are applied to the designated sites with a specially equipped tractor. Appropriate conditions have been created to store fertilizers. Trying to shore up future yields with a more reliable and solid base, may farms have concluded cooperative agreements with the suppliers of fertilizers.

Every rayon has its own complexities and specific characteristics in selecting the tactics for conducting spring field operations. For example, simultaneously with the planting of spring crops, farmers of the Veselovskiy rayon have also had to perform such agrotechnical measures as maintaining and restoring winter plantings. Local field technologists feel that winter crops come out of the winter season noticeably weakened and, for this reason, are greatly in need of sustenance. It was decided to top-dress them by mechanically spraying them with fertilizers where the soil is partially frozen and with planes from the agricultural aviation service on completely thawed ground. For the sake of avoiding delays in the field as a result of fueling problems, reservoirs for the storage of fuel and lubricant reserves are provided near dependable paved roads.

Uzbekistan Undertakes Seeding Campaign

Moscow SEL'SKAYA ZHIZN' 15 Apr 80 p 1

[Article by A. Uzilevskiy, SEL'SKAYA ZHIZN' correspondent]

[Text] The kolkhozes and sovkhozes of Uzbekistan are planting 140 - 150 thousand hectares in cotton every day. The delay caused by a late spring has been overcome. Hundreds of farms have already surpassed last year's pace and have completed seeding.

An accelerated work pace is coupled with a high level of exactingness for the quality of the operations. New methods of agrotechnology capable of sustaining germinated seedlings even in unfavorable weather conditions are being implemented on a broad scale for the first time. In past years, they have frequently been damaged and some have even died from the strong soil crust after heavy rains. Farms where seeds are placed on ridges and where the planting rows are mulched are protected against such damage. This type of test has totally justified itself in the Leninyulskiy and Gagarinskiy rayons of the Surkhandaryinskaya Oblast.

Today a progressive technique is being used on hundreds of thousands of hectares of land subjected to flooding prior to seeding. Numerous of kolkhozes and sovkhozes in the south of the republic, the Fergana Valley, the Tashkentskaya and other oblasts are undertaking seeding on ridges.

Ridges insure rapid warming of the soil, eliminate the repetitive cultivations following flooding before planting, pulverizing and compacting the soil and make it possible to plant seeds in ground with a high moisture content and, because of this, to produce strong and even seedlings. In the event of torrential rains, the water running along slopes into furrows does not flood the rows and this means that no crust will form.

This spring has also been characterized by a further expansion of fields for precision and close-hill seeding with bare and swollen seeds. Planting a fixed number of them has become an indispensable element of the technology of numerous kolkhozes and sovkhozes in the Tashkentskaya, Dzhizakskaya, Syrdarinskaya, Namanganskaya and Samarkandskaya oblasts. This technique has also found active proponents in other parts of the republic.

"We have tried the precision method of seeding and last year got more than 53 centners of cotton from every hectare," says Kholzhamkul Rustamov, crew chief of the sovkhoz imeni Budennyy in the Surkhandarinskaya oblast. "Now all the crews and teams of all seventy planting aggregates at the sovkhoz are planting seed by a strictly assigned plan. The advantage is a double one: we are saving half in expensive seed and have eliminated the need to thin the seedlings."

Unfortunately, as was the case last year, it is necessary to mention that farm orders for bare seed for precision seeding are far from being fully satisfied. A percentage of the prepared seed has turned out in extremely poor condition. The republican ministry for the cotton industry does not demonstrate the persistence needed to resolve the important issue of specializing small groups of their enterprises to produce high quality planting material.

The technology of cotton planting has been improved by this spring and by the technique of heavily mulched soil. The practice of a number of farms has proven the suitability of this technique to prevent formation of a soil crust. The sovkhoz imeni Pyatiletiya Uzbekskaya SSR and the kolkhozes imeni Tursunkulov Yangiyulskiy and "Politotdel" of the Kommunisticheskiy rayon have also applied mulch layers of loose manure, sawdust or waste material from the hydrolysis industry simultaneously with the seeding last season.

The change to progressive technological seeding methods has required a refitting of equipment and providing it with new capacities. A seeder now must have not only a seeding device but also the capacity for simultaneous application of herbicides, fertilizers and mulching materials and it must be reset for precision seeding and seeding on ridges. The republic's Ministry of Agriculture has provided all sovkhozes and kolkhozes with the necessary recommendations and the work is underway in the farm shops. The volume is huge, however, and for this reason, numerous operators have been assigned as a result of this issue: isn't it time for the enterprises of agricultural machine-building for cotton production (they are primarily located in Uzbekistan and the neighboring cotton producing republics) to produce the equipment that will meet the demands of the new technology.

Planting work in Uzbekistan is already three-quarters finished. The Tashkentskaya, Surkhandarinskaya, Andizhanskaya and Namanganskaya oblasts were the first to finish. The kolkhozes and sovkhozes of the Kashkadarinskaya, Dzhizakskaya and Syrdarinskaya oblasts have provided more than ten percent of the daily increase. Reports of the completion of seeding operations are coming in with increasing frequency from farms and rayons.

Not allowing the best days to go by and carrying out high-quality seeding operations is the main goal of all the farmers of the republic today.

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USSR WEATHER FORECAST FOR JUNE

LD041331 Moscow PRAVDA in Russian 1 Jun 80 p 6

[USSR Hydrometeorological Center report: "Warm Beginnings"--first paragraph is editorial introduction]

> [Excerpts] Summer has begun, but over the greater part of the USSR's European territory we have not been treated to any hot weather. Is nature preparing some surprises for June too? Here is the report received from the USSR Hydrometeorological Center by a PRAVDA correspondent.

In the USSR's European territory the first summer month is expected to be hot. There will be normal rainfall. One or two short cool spells are possible. Rain--mainly heavy showers--is most likely in the first half of the month. The daytime air temperatures will mostly reach 25-30 degrees in southern areas, 20-25 degrees in the middle belt and 10-15 degrees in the north.

In the farming regions of the Urals, Western Siberia and Northern Kazakhstan, nighttime temperatures will be between 11-16 degrees and daytime temperatures between 22-27 degrees, sometimes reaching 30-32 degrees. One or two cold spells are expected reaching 5-10 degrees at night and 15-20 degrees in the day. At times there will be rainstorms.

In the south of Krasnoyarskiy Kray, the Baykal and Transbaykal regions, the month is expected to be hot on the whole, though with significant fluctuations in temperature. The mercury will sometimes rise to 29-34 degrees during the day, while on some nights the temperatures will drop to 2-5 degrees and there will even be ground frosts.

In Amurskaya Oblast, the south of Khabarovskiy Kray and Primorskiy Kray, moderately warm weather is expected: the daytime temperatures of 18-23 degrees will increase and reach 25-30 degrees.

On the Arctic Sea coasts the nighttime temperatures will still be freezing, reaching 5 degrees below zero. But on the warmest days air temperatures will reach 10-15 degrees above zero. In the mainland zones of Yakutskaya ASSR and Magadanskaya Oblast, temperatures will reach 20-25 degrees at times.

In Central Asia and in the south of Kazakhstan the mercury will mostly rise to 30-35 degrees and sometimes to 40 degrees. In the Kirgiz SSR temperatures will be approximately 5 degrees lower.

CSO: 1824

COLD SPRING RETARDS PLANT GROWTH

Riga SOVETSKAYA LATVIYA in Russian 14 May 80 p 2

[Article by V. Knava, agrometeorologist: "Weather and Sowings"]

[Text] Under the conditions of the cold weather of this spring, development of vegetation is proceeding inactively and lagging behind the mean periods of many years. In the beginning of May, for example, mean daily air temperature did not exceed 1-6°C, which is 2-5 degrees below the norm. On 4-5 May snowfalls were observed on the fields of primarily the eastern rayons of the republic; a snow cover was formed to a height of 1 to 14 centimeters, which lay for 1-2 days. In the sunny warm days of 7-9 May, when the maximum temperature of the air rose to 13-18°C (Dnugavpils—20°C), the soil dried and the spring field work again went into full swing.

The number of sunny hours in the first 10-day period of May was 70-80 for the republic's western rayons and 40-60 hours for the rest. The leaves continued to unfurl on wild-growing and berry bushes, the birch and maple blossomed; in many orchards, buds opened up on fruit-bearing trees.

Winter grain crops on most fields are entering the stem extension stage, while in the southern rayons of Latvia, stems have started to grow in winter crops. The results of air examination of winter sowings carried out toward the end of April and the early part of May showed that of the examined 87,000 hectares about half of the sowings were in a good condition, 40 percent were satisfactory and 12 percent—poor.

Seedlings have appeared of early (prior to 20 April) sowings of barley; in later sowings, germination of the grain was observed 4-8 days after sowing. Moisture reserves in the plowed layer of the soil with spring grain crops are in normal limits.

Grass is growing slowly. Linear increment in the first 10-day period of May was only several centimeters. In most rayons stem formation was noted in clover, its height here was 8-15 centimeters. Approximately the same height was achieved by meadow grasses. Moisture reserves under the grass in the half-meter layer of the soil are within normal limits.

In the immediate days ahead, the weather is expected to be without precipitation, which would be favorable for work in the fields.

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CSO: 1824

ESTONIAN FIELD WORK PROGRESS OUTLINED

Tallinn SOVETSKAYA ESTONIYA in Russian 29 Apr 80 p 1

[Interview with First Deputy Minister of Estonian SSR Agriculture Il'mar Yulisovich Aamisepp by SOVETSKAYA ESTONIYA correspondent V. Repetskiy: "The Tactics of Sowing"]

> [Text] A time of responsibility has set in for farmers of preparing for and carrying out the sowing.
>
> A SOVETSKAYA ESTONIYA correspondent met with First Deputy Minister of Estonian SSR Agriculture Il'mar Yulisovich Aamisepp and asked him to answer a number of questions relating to carrying out of the sowing.

[Question] Our meetings at this time have become traditional. But we know that despite the seeming uniformity not a single year nor a single time resembles another. I thus would like to the talk of the differences of the present spring.

[Answer] We are talking today on the threshold, more precisely on the step of the spring of the final year of the Tenth Five-Year Plan. This circumstance imposes special obligations on agricultural workers. It should be admitted that there are still lagging sectors in the work of fieldworkers, there are farms whose farmers have not fully fulfilled the targets of the first four years of the five-year plan. For this reason, work will have to be arranged in such a way this year as not only to rectify the situation, not only to meet the targets of the five-year plan as a whole, but also to lay the foundation for the further intensive development of the fieldworking sector.

[Question] What then will the main efforts of the farmers be concentrated on?

[Answer] First there is the task of further increasing grain production primarily through increasing crop yields. And, second, it is necessary to significantly increase forage stocks, especially, and in the first place, feed from grasses. Special attention will be paid to raising the quality of procured fodder.

[Question] Tell us, please, how they are preparing for the spring start on the farms.

[Answer] I can say with full responsibility much better than at any time in the past. Here is confirmation of what I have said.

The republic is fully provided with seeds. And all the seed material is quality material. It is enough to say that only seeds of grain crops will go into the soil that fully conform to the requirements of first and second classes. More than half of the seeds for grain crops are made up of intensive varieties.

There is also a sufficiency of seeds of perennial grasses, likewise of the necessary standards; there is a sufficiency of seeds for corn, potatoes, food tubers. It would be desirable to get more seeds for leguminous crops, particularly peas, but this evidently will not be done.

As of 1 April, 7 percent more organic fertilizer than last year was taken into the fields. We hope that each hectare set aside for spring sowing will receive about 20 tons of organic fertilizers, which significantly exceeds the indicators of prior years.

As for the readiness of tractors and agricultural equipment, if my memory does not deceive me, you called one of your pieces of reporting "At Least Tomorrow into the Fields." This title possibly describes more accurately the degree of readiness of the machine-tractor park to carry out spring field work.

It is important to point out that all the tractors which will be in use in the spring work are provided with operators. It is true that at some farms there are not enough tractor operators as before, but this spring work will include having on tractors representatives of different vocations who have acquired the specialty of tractor operator. In addition, almost 1,000 operators from patronizing enterprises, construction projects and organizations.

This spring we shall carry out the spring sowing in most close contact with specialists belonging to the system of the State Committee of Sel'khoztekhnika. They are ready at our first request to come to our aid, especially to farms which may suddenly be lagging for one reason or another.

[Question] Now, please, tell us about the tasks facing farmers in the immediate days ahead.

[Answer] The main strategic task is to carry out the spring sowing as early as possible. Under the conditions of our republic, the best agrotechnical times signify an early sowing.

In my 30 years of work in agriculture, I do not remember an instance where even a single farm suffered from conducting its sowing operations early. But, on the other hand, I remember, unfortunately, any number of instances where farms in the fall failed to get needed quintals only because they were late with the sowing.

Despite a very slow emergence of the spring, even though the snow had disappeared rather early, it is possible to do field work on light soil and selective sowing even today at most of the farms. This is what they are doing on the farms of Khiumaaskiy, Kingiseppskiy, Khar'yuskiy, Rakvereskiy, Pyarnuskiy, Paydeskiy and Tartuskiy rayons.

[Question] The fulfillment of the main strategic task, as you put it, requires handling successfully a number of priority tactical matters...

[Answer] That's quite true. I shall mention some of the most important ones that can't stand delay.

First of all, those farmers are on the winning side which are the first to deal, before the onset of mass field work, with the spreading of fertilizers and with stone removal. It is necessary to take into consideration that under our conditions stone removal and fertilizer spreading constitute about 60 percent of the total volume of spring field work.

Those farms are proceeding correctly which devote their main attention to this today. I shall cite as a positive example the kolkhozes and sovkhozes of Khiumaaskiy rayon where minderal fertilizers have already been applied to most of the fields. The same thing is happening on the farms of Kingiseppskiy Rayon.

In regard to stone removal, it is important to concentrate on this work at one time maximum equipment and working hands. Those farms are acting improperly which diffuse their efforts by sending some to do stone removal and others to other work. All this work cannot be carried out simultaneously with the spring sowing. I repeat--only the mobilization of all efforts for freeing the fields of stones prior to the start of outright spring field work will allow the sowing to be carried out in minimum time with minimal expenditure of manpower resources and equipment.

[Question] When, according to the forecasts of the meteorologists, will it be possible to start mass sowing?

[Answer] This year the most favorable time for sowing will be the first 10-day period of May.

[Question] But aren't there many holidays and days off at that time?...

[Answer] Yes. May Day and the 35th anniversary of Victory--these bright and wished for holidays coincide with the most favorable period for carrying out the sowing. I am certain that every farming worker understands this. I am deeply convinced that farmers and machine operators on the republic's kolkhozes will spend these days in the fields because these are the days that largely decide the fate of the harvest. Of course, farm directors must think out carefully ahead of time when to give those engaged in the sowing time off and to arrange, of course, remuneration of labor in accordance with existing legislation.

[Question] How will control be exercised over the quality of the sowing?

[Answer] As you know, a great deal of attention is devoted each year to the performance of spring field work. But a significant defect has existed in this work. According to existing tradition, the quality of the sowing was assessed after the seedlings came up. Of course, the educational value of such a method cannot be doubted; the best were rewarded both morally and materially; those who failed receive their due. But one thing was unfortunate: it was already too late to rectify anything.

This year a quality inspector will be designated on each farm from among the most skilled and leading agronomists for the period of the spring field work. His task is, together with the heads of units, to keep track daily of precision of adherence of fulfillment of all agrotechnical procedures in the spring work. And what is especially important is that on observing a fault to immediately oblige the guilty party to redo the work. In brief, on cases of poor-quality work being detected early, it will now be possible to immediately eliminate the deficiencies.

In conclusion, I would like to wish fieldworkers and machine operators success in carrying out the spring field work, for the fate of the harvest in the concluding year of the five-year plan largely depends on it.

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PROBLEMS IN THE WAY OF SOWING PROGRESS IN LITHUANIA

Vilnius SOVETSKAYA LITVA in Russian 14 May 80 p 1

[Article issued by the Lithuanian Ministry of Agriculture: "To Hold Each Hour Dear"]

[Text] The spring sowing in the republic is the cause of much concern in many places: less than half of the spring crops have been sown on the farms.

In some places, all sowing work is not sufficiently well organized; equipment is not used productively, nor is it well assembled or serviced. Many cases are to be found where gaps occur between preparation of the soil and the actual sowing. The big tractors are not operated on a two-shift basis on all the farms, and the sowing links are not working an extended workday everywhere. Sowing work should be speeded up first and foremost by farm heads and specialists in Anikshchyayskiy, Ionavskiy, Kayshyadorskiy, Kaunasskiy, Paneveshskiy, Tauragskiy, Shirvintskiy and Yurbarkskiy rayons.

There is also concern because the sowing of sugar and fodder beet, flax, legumes and the planting of potatoes and seedlings are being dragged out.

Under today's conditions, it is important to use each working hour as effectively as possible. Farm heads and specialists must take without delay effective measures to ensure maximal sowing tempi. With this end in mind, all farms have to make more productive use of machinery, assemble equipment in the required manner, organise its group work, provide it well with fuel and effectively eliminate breakdowns. It is essential to make sure that equipment is not left idling anywhere, which still does happen. The operation of all high-power tractor should be organised on a two-shift basis. The acceleration of sowing work requires help in the form of equipment and machine operators from other organizations. It is very important to sow as fast as possible on soil that has been prepared for sowing. There should be developed a practice in the rayons where farms that have completed their sowing send their equipment and operators to those places where this work is lagging.

No matter how hard-pressed one might be for time, the quality of work must not be neglected. In determining sowing norms, it is necessary to be guided by the recommendations of scientific institutions and to sow only well treated seeds, embedding them to the necessary depth. For seedlings to be more uniform in emerging, it is necessary to pack the sowings with a roller.

The protracted, cold spring is very conducive to weed growth. Consequently they must be dealt with intensively through good cultivation of the soil, harrowing it before the sowing and before and after the emergence of seedlings. The mechanical means of dealing with the weeds should be ably combined with chemical ones.

In each rayon there is a greater or smaller area of dead winter crops. They must be resown as quickly as possible with spring grain crops. Those sectors of land on which it was impossible earlier to use equipment because of a surplus of moisture must also be completely sown.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

LITHUANIAN SOWING PROGRESS REPORTED

Moscow IZVESTIYA in Russian 21 May 80 p 1

[Article by IZVESTIYA correspondent I. Kasyukov, Litovskaya SSR: "Sow on Time and You Harvest More"]

[Text] This is what the Lithuanian masters of big harvests believe. And today, one might say, that their call has been picked up on all of the republic's farms. This year the farmers of Lithuania assumed bigger socialist commitments--to take in on the average no less than 28 quintals of grain per hectare, almost 170 quintals of potatoes, more than 140 quintals of vegetables and 25 tons of beet.

...Together with I. Mikhal'kevich, the secretary of Shal'chininkskiy Rayon Committee of the Communist Party of Lithuania, I am making a tour of kolkhoz and sovkhoz fields. After two weeks of cold weather accompanied by morning frosts and snow, the long-awaited warm weather has arrived and meadows and pasturages have turned green, winter crops, which bore the cold very well, have started to grow favorably, and the seedlings of spring grains have appeared. The external signs of a good harvest are being bolstered by good agrotechnics, clear-cut, efficiently organization of labor used in the sowing of spring crops.

Managerial foresight made it possible to repair equipment with a high level of quality and, what is most important, to include in field work with the onset of spring practically the entire tractor park. The results exceed all expectations. Shal'chininkskiy Rayon farmers were the first in the republic to complete the sowing of grain crops in seven workdays. By the end of the second 10-day period of May, more than nine-tenths of spring-crop fields had been sown in the rayon. The same figures apply to last year, when the sowing was approximately large, although field work was then started considerably earlier.

The farms of Varenskiy, Lazdiyskiy, Zarasayskiy, Trakayskiy and other rayons of the southeastern zone where light soils predominate are close to completion of the sowing of spring crops. Four-fifths of all spring crops have already been sown for Lithuania as a whole. In some rayons 15 or more percent of the spring fields have been sown in the course of one day.

The protracted spring increased field work to the limit. Time exerts its pressure. Simultaneously with the grain crops, they are sowing grasses and flax and are planting potatoes, beet and vegetables. In Shal'chininkskiy Rayon, they began sowing corn for silage last week. Seeds specially treated against the action of cold weather were supplied by their neighbors --Belorussian kolkhoz farmers.

The fields in Lithuania are hilly. The soil on hillocks ripens sooner than in the low places. For this reason, sowing is carried out selectively. Of course, they admitted to me at one of the kolkhozes in Lazdiyskiy Rayon, this is troublesome work. Some fields have to be sown in two-three visits. In each case, moreover, it is necessary to select tools that are suitable for the relief. But, on the other hand, all the seeds go into the soil at the most optimal times, guaranteeing a big yield.

A good sign of this spring is the fact first-rate seeds are being sown everywhere. Areas for leguminous crops are being expanded. This circumstance is particularly gladdening to animal-husbandry workers.

The observance of seed-embedding depth norms in sowing and quality postsowing cultivation are being kept track of as in previous years by control posts headed by deputies of local soviets.

Unfortunately, even this year the sowing is not without sorry lapses and blunders. And the reasons for them are not to be found in the caprices of the weather. They are the result of unsatisfactory preparation on the part of some farms for the period which is responsible for deciding the fate of the harvest. In some places in Panevezhskiy and Tauragskiy rayons, they allow an excessively large gap between preparation of the soil and the sowing; on farms of Akmyanskiy Rayon breakdowns of tractors are frequent and the powerful T-150's are not being used everywhere on a two-shift basis.

The quick elimination of the defects will make it possible to create conditions for obtaining a big harvest in the final year of the five-year plan.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

PLANTING PROGRESS ON VIRGIN LANDS OUTLINED

Moscow IZVESTIYA in Russian 1 Jun 80 p 1

[Excerpted article by Ye. Dutov, head of department of Kustanayskaya Oblast newspaper LENINSKIY PUT', and IZVESTIYA correspondent G. Shepit'ko]

[Excerpts] On Kazakhstan's virgin lands, sowing has been completed on 23 million hectares. The first to finish were the workers on the steppe along the Ishim River. This year grain crops in Tselinogradskaya Oblast take up 2.8 million hectares; 2.3 million hectares of these are sown with wheat. Despite the difficulties of this year's spring, the sowing was completed in 10 days. The farmers of the largest granary in the republic, that of Kustanayskaya Oblast, carried out the sowing campaign in an organized manner. The last hectares of grain crops have been sown by the farms of Kokchetavskaya, Severo-Kazakhstanskaya and Turgayskaya oblasts.

The spring presented the farmers with many surprises. But the machine operators set up against the difficulties clear-cut organization of labor and completed in a timely manner the complex of operations relating to the preparation of the soil. For example, in Tselinogradskaya Oblast, 250,000 hectares were planted daily. The able operation of 700 complexes made it possible to complete the sowing five days ahead of time. The links of maintenance workers and units handling everyday, cultural and medical services worked efficiently. Last year, the oblast's farms grew an average of 17 quintals of grain per hectare, this year they are trying not to get less.

The farmers of other oblasts of North Kazakhstan have big commitments. For example, the farms of Kustanayskaya Oblast decided this year not to take in less than 5 million tons of grain of the strong and hard wheats. A competition was launched in the oblast to obtain one billion poods of grain in the Tenth Five-Year Plan.

Today the virgin lands are the biggest producer of high-quality grain. On the average more than 10 million tons of grain go from here into state granaries. This year the farmers decided to reach high levels in grain production. Today sowing of grain crops has been completed everywhere. The sowing of buckwheat and other crops is coming to an end.

In a little while, the fields get green. For rural workers, a new and responsible period is beginning--fodder procurement. At the storage places, the first tons of hay and haylage have begun to arrive. A reliable foundation is being established for public livestock.

Each virgin-land farmer and each worker in the republic is striving to mark the last year of the Tenth Five-Year Plan with a high level of production of agricultural products.

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CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

FIELD WORK PROGRESS IN TSELINOGRAD REVIEWED

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 21 May 80 p 1

[Article by special correspondent V. Vasilenko, Marinovskiy Rayon, Tselinogradskaya Oblast: "Strictly According to Plan"]

[Text] There was little snow last winter in Priishim'ye, but thanks to the fall rains and spring showers the arable land has received a good supply of moisture.

For several days prior to going into the field the brigade leaders of the Krasnaya Zarya Kolkhoz, along with the specialists, once again have been improving the work schedule and making corrections in the technological plan for the sowing. Everyone on the farm has the same goal -- to consolidate the success we have achieved in the republic's jubilee year.

In 1979 K. Shakhanova, Komsomol-youth brigade leader, obtained a record grain yield -- an average of 23.7 quintals per hectare, leaving behind her constant rival brigade leader A. Lada, who possesses an honorary astronauts' pendant. The current competition will be hot; everything points to it. The brigades have been carefully prepared for the sowing; mutual inspections have made it possible to eliminate even tiny shortcomings.

Machine operators Zeynulla Tautekov, Vladimir Shtrom, Anatoliy Uzel'man, and Petr Shvester were the first to begin selective field work. The volume of work is tremendous. Last fall the reaping was somewhat drawn out; therefore, many fields were not cultivated. But still they were able to turn over the autumn plowland on those fields where wheat is located as the third and fourth crop after fallow. The stubble background made it possible to retain the snow and moisture. In the early spring the BIG leveled the soil surface and stimulated the weeds. After the warm days they entered the growth stage, and now the machine operators are clearing the fields for them.

S. Boranbayev, the kolkhoz's chief agronomist, says, "We have a choice of implements. Therefore, depending on the condition of the field and the thickness of the wild oats we use the KPSh-9 or KPE-3.8 wide-swath cultivators in the pre-sowing cultivation. On individual fields we use stubble breakers with sharpened discs. Some areas are cultivated in two passes as necessary. And then we sow immediately. The Kirovtsev drivers Sultan Biteupov, Anatoliy Astashkin, Nikolay Babenko, and their comrades were the first to take the units out.

On the farm the equipment is used complexly. So that the units do not stand idle because of breakdowns, teams of expert adjusters supplied with the necessary equipment and spare parts have been organized in all three brigades.

The kolkhoz board and party committee are paying special attention to the organization of labor and mode of life of the machine operators. Field camps with dormitories, dining rooms, and reading rooms have been outfitted for all the brigades. Vendor-less booths are in operation, and a mobile store comes according to a schedule, filling the machine operators' orders. Here is another interesting detail: the accountant records the machine operators' wages daily on the indicator board along with their output.

The kolkhoz has a good tradition — it congratulates the leading workers directly in the field. The agitbrigade organizes concerts in their honor. Such attention raises the people's spirits, and they work enthusiastically.

The farm plans to complete the sowing in 8 to 10 workdays, and the machine operators hare keeping to the work schedule.

Commentary on Priishim'ye Field Work

The mass sowing of grain is underway in all rayons of the oblast. Deputy Chief of the Tselinogradskaya Oblast Agricultural Administration Veniamin Konstantinovich Khan comments on the course of the field work in the Priishim'ye:

This year grains will occupy 2.8 million hectares here. The volume of work is huge. To complete it on time, the farms concentrated all their equipment in 634 complexes formed on the basis of brigades. Long before the exodus to the fields seminars were held in the oblast center and in the rayons: scientists from the All-Union Scientific Research Institute of Grain Farming and specialists discussed the special features of agricultural practices given the conditions of the current spring and made recommendations to the field-crop growers.

Technological maps and work plans for the sowing were drawn up on all the farms and in all the brigades. Special attention was focused on the highly productive use of the Kirovets tractors. At present they are being used for more than half of all the operations and three quarters of just the sowing. Half of the Kirovets tractors are assembled to work in two shifts. The oblast is making do with its own forces. During the spring an additional 5,000 machine operators were trained on the sovkhozes and in the towns and rayon centers; they have come to the aid of farms in Krasnoznamenskiy and several other rayons which did not have enough cadres. Party and Komsomol groups and people's control posts which, along with the agronomists, oversee the work quality were set up within the complexes.

The units were equipped mainly with anit-erosion implements and machines. The pre-spring cultivation of the soil was strictly differentiated -- depending on the agronomical background, soil salinity, moisture, and peculiarities of crop cultivation. Currently the volume of operations performed by flat-disc implements constitutes two thirds of the total.

We are locating almost half of the wheat on areas after the best precursors, including 40,000 hectares after fallow. Barley and other soil improving crops have been sown earlier in Priishim'ye soils of many solonetz complexes, with consideration for their peculiarities. Mineral fertilizers will be applied simultaneously with the seed on one fifth of the grain area.

The quality of the sowing is the main indicator by which the machine operators' work is evaluated. It should be said that they are achieving it by adherence to the set pace. So that the wheat is sown at the best time -- before 25 May, the units in the oblast must have a daily output of 200,000 to 220,000 hectares. We think that it will be higher at the "peak" of the word.

Farm and brigade collectives have taken on increased obligations in honor of the republic jubilee.

7990
CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

FIELD WORK IN KHAKASSKAYA AUTONOMOUS OBLAST

Moscow SEL'SKAYA ZHIZN' in Russian 20 May 80 p 1

[Article by P. Zinkeyev, Khakasskaya Autonomous Republic: "Producing a Full-Weight Ear"]

[Text] The farmers of Khakasiya must complete a large amount of field work in the near future. Almost 340,000 hectares await spring plowing and cultivation with sweeps. A still larger area must be put into grains. This is why 1,500 units went into the fields as soon as the soil was ready.

In the zone of risky farming the fight for moisture is extremely important for the harvest. At the beginning of the vegetative period it is necessary to have no fewer than 1,800 tons of water per hectare in the meter soil layer in order to produce 18 quintals of grain per hectare, as has been planned, for example, by the farmers of the Znamenskiy Sovkhoz. At the present time there are 1,100 tons in reserve. This is a gift of nature, as we say. The rest is in the hands of grain farmers. In Znamenskiy Sovkhoz everything possible was done to provide an agronomic basis for its goals. Crop rotations have been introduced and assimilated, strip farming is being utilized on half the plowland, the non-mouldboard method of soil cultivation is being utilized on 7,200 hectares and 2,000 hectares are in stubble.There was concern shown for good supplies of organic fertilizers. Mineral fertilizers are applied only by means of the local method with the aid of 14 sowing units. All seeds of regionalized varieties of first and second class were irradiated with the aid of lasers to increase their vitality.

In Khakasiya there are many other enterprises that are dealing complexly with the problem of farming under drought conditions and are producing good harvests. About 300 soil conservation crop rotations have been assimilated, the strip distribution of crops has been introduced and hundreds of thousands of hectares are being treated with counter-erosion equipment. The proportion of fertilizers is growing and the fallow fields are being expanded. However, errors have been made.

In Bogradskiy and Shirinskiy rayons along the field roads that I chanced to travel the plowed strips usually do not bend round hills but go up and down. Isn't there a danger of water erosion on such fields? Scientists recommend that soil be cultivated and sown across the slope or along the contour. Hole-digging and other methods should be utilized.

Sowing with SZS-2.1 stubble sowers has been justified. According to the oblast agricultural experimental station, this method increases the yield of grain by 3.8 quintals per hectare as compared with mouldboard fields. It is gratifying that this method is being more and more widely utilized.

Everyone knows how important the role of crop rotations is for soil conservation. Why have 66 crop rotations in the oblast not yet been assimilated? The distribution of crops is not always regulated--14 percent of grain crops occupy the same fields 3-4 years in a row. Sometimes, as happens in Bogradskiy Rayon, new grain fields are "squeezed" into established crop rotations, thus violating the entire system. In Askizskiy Rayon 15 crop rotations have not yet been established; in Ust'-Abakanskiy--33. This is still a minus for productivity.

But the most alarming thing is that during this year's sowing period Khakassya farmers have begun work without a full supply of conditioned seed and an incomplete system for applying fertilizers. At the beginning of field work there were 19,900 tons of third-class seeds which were weed infested. What kind of shoots can be expected from them?

This grain is put into poorly-fertilized soil. Moreover, according to the data of the Abakanskaya zonal agrochemical laboratory, the mineral fertilizers available to oblast sovkhozes and applied by the local method can secure an increase of 30,000-50,000 tons of grain. How are resources utilized? At the present time only 150 kilograms of every ton are applied locally, with the remainder applied by scattering. Half of the possible manure is applied.

This spring requires coordination and precision in work from the oblast farmers because of the late sowing schedule. Arranging the entire cycle of agricultural measures, making sure that the factors working for the harvest are weightier than those working against it--these are the important goals of farmers. When this is accomplished the hopes of farmers for full-weight ears in the fields of Khakasskaya Autonomous Oblast will finally be fulfilled.

8228
CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

CROP PROGRESS IN NORTHERN KAZAKHSTAN

Moscow SEL'SKAYA ZHIZN' in Russian 30 May 80 p 1

[Article by A. Kostyukov, Tselinograd: "In the Best Time"]

[Text] The grain farmers of Northern Kazakhstan are completing the sowing of spring grains. On millions of hectares seeds have been placed into moist, well warmed soil. No less importantly, the seed was sown on schedule during the most favorable 10-day period for the zone. In all rayons it was possible to await the mass appearance of weeds and to clear the fields of them before the optimal sowing time.

There is every reason to hope for a good harvest. In Tselinogradskaya Oblast, for example, about half of the wheat was sown after the best predecessors, including 400,000 hectares on clean fallow. The structure of sowing areas has been corrected in consideration of past experience. In enterprises where immature grains are caught in August frosts the proportion of rapidly-maturing barley is increased. Two-thirds of the total volume of field work has been fulfilled using counter-erosion technology.

Virgin-lands enterprises are still not sufficiently supplied with phosphorus fertilizers, and the return on them here is great. For this reason at agronomists' meetings and conferences of machine operators the following requirement was heard persistently--phosphorus fertilizers were to be applied only in rows during sowing. This accomplished the job. Most of the fertilizer was put into the soil together with the seed.

At the present time machine operators are sowing grey grains and making supplementary sowings of millet and corn for silage. But the "flashes" and battle pamphlets which are in large supply at the stands near field stands still preserve the fervent breath of great and difficult work. Here is a "flash" informing the machine operators of the Tselinograd Ivanovskiy Sovkhoz that Komsomol member Genadiy Pokatovich sowed 107 hectares in one day on a K-700 as compared to the planned 34. In Kokchetavskaya Oblast Hero of Socialist Labor Yesil'bay Kadralin became the leader in competition under the motto, "Grain Farmers' Guarantee for Harvest 1980." Record achievements have recently been registered in Pushkinskiy Sovkhoz of

Severo-Kazakhstanskaya Oblast. Tractor operator Asker Agzamov, working on the Kirovets, sowed 135 hectares in wheat.

The shoots will provide the final evaluation of the quality of work done by the machine operators. Actually, they are already doing this. On fields sown with the first seeds the delicate plants are already visible. Agronomists are satisfied because the shoots are strong, uniform and capable of producing good ears.

8228
CSO: 1824

WORK PROGRESS IN ALTAYSKIY KRAY

Moscow SEL'SKAYA ZHIZN' in Russian 24 May 80 p 1

[Untitled article by A. Torichko, Altayskiy Kray]

[Excerpts] The endless Altay fields are humming with thousands of sowing units. But if one starts up a conversation with a grain farmer, he will without fail recall the winter. There was little snow, the soil practically did not accumulate vernal moisture and in addition the fields were subject to sun and wind early.

"The existing situation," says the deputy director of the kray agricultural administration, A. B. Mishin, "determines the strategy and tactics of field work. The main goal is to maximally retain moisture in the soil during all of the agrotechnical operations."

The situation is made more difficult by the fact that a cold spring slowed down the appearance of weed shoots and made pre-sowing cultivation more difficult. In order to complete work in optimal time enterprises have equipped high-speed units and organized around the clock work.

Communists and all grain farmers in the largest granary of Siberia understand well that on fields where grains alone will occupy 4.6 million hectares, a large harvest can be produced only by means of great and intense labor, on the basis of the entire complex of agrotechnical, organizational and ideological measures.

This year Altay farmers have done a great deal to produce a large harvest and to put no fewer than 4 million tons of grain into state granaries, including 1.5 million tons of hard, strong and valuable varieties of wheat. Almost double the amount of organic fertilizer will be put into the soil this year as compared to last. In addition, 70-80 kilograms of mineral fertilizers per hectare will be applied. Over half of the planned wheat crops will be put in after fallow or a second crop or in the furrows of perennial grasses. Good quality seed will be used for sowing, 85 percent of which are either first or second class in the sowing standard.

Altay grain farmers have given special attention to crop structure with a view to increasing the return on each hectare of plowland. A weighty increase in yield, for example, is expected from expanding the area in the promising wheat varieties Novosibirskaya-67, Tselinnaya-20, Omskaya-9, Altayskaya, Almaz and others, which will occupy 1.1 million hectares, or double last year's area. There has been a significant increase in the area in millet, buckwheat, legumes. The cultivation of sunflowers is being placed on an industrial technological basis.

From the foothills of Salair the front of field work has moved to the west, to the Kulundinskaya Steppe. The sowing of all spring crops that are cultivated in the Altay is in full swing.

The first to complete the sowing of early grains were the grain farmers of Altayskiy Rayon. Reports are being received about the conclusion of sowing in the enterprises of Kamenskiy, Yegor'yevskiy, Krasnogorskiy, Smolenskiy and other rayons. Sowing spring crops on schedule means utilizing summer precipitation, protecting crops from frost in the fall and completely harvesting and preserving the future harvest in Siberia.

8228
CSO: 1824

FIELD WORK IN URAL'SKAYA OBLAST

Moscow SEL'SKAYA ZHIZN' in Russian 30 May 80 p 1

[Article by B. Kuznetsov, Ural'skaya Oblast: "In the Best Time"]

[Text] The sovkhozes and kolkhozes of Ural'skaya Oblast are widely introducing a wheat variety that was locally developed--Ural'skaya Yubileynaya. This year it was used to sow over 10,000 hectares of plowland.

In grain crop rotation an important place is being occupied this year by millet, which is represented by two main varieties--Saratovskoye-3 and Ural'skoye-109. Both varieties surpass the traditional Saratovskoye-853 variety in productivity and quality of grain. For example, the average productivity of Ural'skoye-109 during the last 3 years has been 16.4 quintals as compared to 15 quintals obtained from a hectare of Saratovskoye-853.

The rapid sowing campaign has stretched out unusually. The warm weather has resulted in the active growth of weeds. In order to completely destroy them, the station has delayed the start of work by sowing units. The lag was used effectively to perform additional soil cultivation.

Machine operators T. Kudesov, M. Dushanov, G. Mikhaylenko, M. Kudaybergenov, V. Tvaranavichus and others performed shock labor in this area. Tractor operators Vasiliy Lykov, Vladimir Vavilin and Gennadiy Tabakov overfulfilled norms on test plots of scientific divisions. They are all involved in the production of the highest quality seed that will provide a good foundation for succulent ears in crop-rotation fields of sovkhozes and kolkhozes of the oblast and that will encourage the growth of productivity of a hectare of grain in the steppe Priural'ye.

8223
CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING SOIL CONDITIONS IN NOVOSIBIRSKAYA OBLAST

Moscow IZVESTIYA in Russian 25 May 80 p 1

[Article by A. Illarionov, Novosibirskaya Oblast: "First and Foremost -- Quality"]

[Text] The spring period is rather unusual this year in southwestern Siberia. There was very little snow and it evaporated just as quickly as it thawed out. The early April thunderstorms produced more noise than moisture for the ground. Nor has there been an abundant amount of rainfall during May. Thus it comes as no surprise to see the sowing machines raising clouds of dust.

The director of the Order of Lenin Berdskiy Sovkhoz, I. Launov, put a call through to the weather forecasters.

"Even if it amounts to only 14 millimeters of precipitation" he stated, "but they did not even promise this amount."

During the past few years, there have not been any significant differences among the grain growers with regard to the sowing periods. The best period is the third decade in May. This year the supply of moisture in the soil is worth its weight in gold and perhaps work could have been started earlier.

"We waited until the wild oats made their appearance" stated Ivan Ivanovich, "although we have very little, nevertheless the wild oats must be controlled."

No sooner did the long-awaited wild oats make their appearance, than the tractors together with cultivators and harrows were moved out onto the fields. They were followed almost immediately by the sowing units. The machine operators performed at a fine tempo. Simultaneous with the sowing of the grain crops, the potatoes were planted and the soil was prepared for silage corn.

In the southern part of the oblast, I followed a field road until it brought me to the chairman of the Siberian Branch of VASKhNIL [All-Union

Academy of Agricultural Sciences imeni V.I. Lenin], Academician P. Goncharov. A field crop grower, he has worked for many years on the fields of Siberia and he is unable to sit still in an office after the sowing campaign has commenced.

We decided to visit the Cherepanovo Experimental-Production Farm, which is well known for the fine manner in which its operations are organized and also for its productive use of equipment. Finally the fields are before us. A "K-701" passes on our side; it is towing five sowing units and a red flag is flying from its cabin. This is the crew of machine operator F. Levashov, which sowed 270 hectares in just 1 day against a norm calling for only 80.

Certainly, the concept of a "working day" is a rather arbitrary one for F. Levashov with regard to sowing operations. He works according to the principle: if there is no rain, work from sunrise to sunset. And all of the conditions have been created for him to do this: three hot meals each day, timely filling of the sowing units with grain and fertilizers, efficient technical servicing. All of these factors made it possible for Levashov to establish a unique record for the oblast. Reports are being received concerning high output levels by other farms and other rayons.

The work schedules are very important. But the dry spring conditions pose a special requirement with regard to selecting the agricultural practice to be employed. First of all, the moisture must be retained in the soil. We go out onto a field. Here the gusts of wind are stronger. But they are not raising up clouds of dust: the soil was thoroughly rolled.

"The cultivators and harrows are followed immediately by the sowing machines and rollers, practically without interruption" stated the director of the farm, V. Sablin, "this helps to reduce evaporation."

We carefully move aside the upper layer of soil. There lies the grain. It lies on a damp bed. The proper conditions are available for the seedlings.

On this same day we also encountered fields which were not so well prepared or sown. On some farms the harrowing work has been delayed and problems are being encountered. Nevertheless, this is an exception to the general rule. The overwhelming majority of the kolkhozes and sovkhozes in Cherepanovskiy Rayon, in terms of the agricultural practices being employed, are raising themselves to the level of the experimental-production farm. The grain growers are striving to complete their grain sowing operations as quickly as possible.

7026
CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

GRAIN SOWING OPERATIONS COMMENCE IN NORTHERN KAZAKHSTAN

Moscow PRAVDA in Russian 21 May 80 p 1

[Article by V. Vorob'yev and Ye. Zaytsev, northern Kazakhstan: "With Virgin Land Scope"]

> [Excerpt] Sowing operations have commenced in the virgin lands of Kazakhstan. Grain seed must be sown in a rapid and high quality manner on almost 14 million hectares, by the grain growers in Kustanayskaya, Tselinogradskaya, Kokchetavskaya, Turgayskaya and Severo-Kazakhstanskaya oblasts. Last year a record harvest was obtained in Kazakhstan. This year the virgin land workers have again planned high goals for themselves. They have resolved to furnish more than 10 million tons of grain.

"Very fast rates and high quality work are typical features of this present spring season" noted the 1st Secretary of the Tselinogradskaya Oblast Committee of the Communist Party of Kazakhstan, N. Morozov, "party and party-komsomol groups have been created in all of the sowing complexes operating throughout the oblast. They have become the nucleus for rallying the collective to carry out its work in an efficient manner. Of 2.8 million hectares sown in grain crops, 2.3 million hectares are occupied by wheat.

Many of the sowing complexes immediately achieved maximum outputs. This was the result of efficient preparations for the spring campaign. The equipment was prepared better than previously has been the case. Many machine operators improved their skill classifications during the winter. The experience of leading brigades was disseminated extensively. This included the brigades headed by Mikhail Dovzhik, Nurgabul Malgazhdarov, Stanislav Gavrilyuk, Vladimir Dityuk and Vasiliy Akulenko, all of whom obtain high yields each year. Ninety two percent of the seed is of first or second class quality -- higher than last year. Last year the oblast obtained an average of almost 17 quintals of grain. This year the farms are striving to surpass this level.

The sowing operations in other oblasts of northern Kazakhstan are also being carried out at a high tempo. For example, the majority of the units in Kokchetavskaya Oblast are being operated on a double shift basis.

In Turgay, where there is an acute shortage of machine operators, the experience of the brigade headed by V. Butym, of the Turgay Sovkhoz-Technical School, has been disseminated extensively. For several years now, this brigade has used only Kirovets machines and highly productive towing equipment. This year, hundreds of such complexes will be used for carrying out the sowing work on the oblast's fields.

The non-schedule system of wages for machine operators, which serves to raise interest in the final results of labor, is being introduced into operations in Kustanayskaya Oblast on an extensive scale. For example, on the eve of the sowing campaign the Uritskiy Rayon Party Committee discussed the work of V. Yermakov's team at the Sovkhoz imeni Chekhov, which employs the new system. Last year, a group of five machine operators raised grain on almost 3,000 hectares. An average of 26 quintals of grain per hectare was obtained. At the present time, the team is competing to obtain no less than30 quintals of grain from each hectare of planting. Others are now following the examples set by leading workers. In Uritskiy Rayon alone, brigades at the Sevastopol'skiy, Barvinovskiy, Mayak and imeni XXV S"yezda Partii sovkhozes have converted over to this progressive wage system.

The sowing rates in a majority of the rayons in northern Kazakhstan are higher than last year's rates. However, incidents of equipment lying idle and other operational problems are still occurring. For example, a number of machines broke down in Kurgal'dzhinskiy Rayon, Tselinogradskaya Oblast, as a result of low quality repair work. Fourteen tractors in Enbekshil'derskiy Rayon, Kokchetavskaya Oblast were unable to participate in operations owing to a shortage of spare parts. Only rarely do domestic services workers make an appearance at the field camps of a number of virgin land farms. Nor are all of these camps equipped with showers; at times the machine operators have no facilities at their disposal where they can wash themselves at the end of a working day. The party committees and the soviet and economic organs must do everything possible to ensure that the necessary conditions are created for the virgin land workers.

Northern Kazakhstan is the country's largest producer of high quality grain. Each year it produces 80 or more percent of the all-union procurements of strong wheat. During the final year of the five-year plan, the virgin land workers are striving to achieve new goals and to supply the granaries of the homeland with greater quantities of high quality grain.

7026
CSO: 1824

CROP DAMAGE CAUSED BY BAD WEATHER IN ARMENIA

Yerevan KOMMUNIST in Russian 26 Apr 80 p 2

/Article/

/Excerpts/ On the republic's kolkhozes and state farms, despite unfavorable weather conditions, the sowing campaign has gained in scope in the last few days. According to operative data on 25 April, 71,562 hectares have been sown, which comprises 41.7 percent of the planned assignment. One-half of this area has been sown only in the last 5 days. The sowing of grain crops has been carried out on 36,000 hectares and of annual grass and silage crops, on 20,000 hectares, the pure sowing of perennial grass, on 3,600 hectares and the sowing of corn for silage, on 860 hectares and of fodder root crops, on 550 hectares.

Of the envisaged 10,440 hectares potatoes have been planted on 6,000 hectares, including early ripening potatoes, on 1,446 hectares.

Vegetable growers have also gone out to the field. Tomato, cabbage, onion, cucumber and other crop seedlings have already been sown and transplanted on more than 2,000 hectares.

The sowing of sugar beets has begun. The first hundreds of hectares have been sown in Akhuryanskiy Rayon.

Despite the work done, as noted in the headquarters, the present rates of the sowing campaign in individual places, especially in the north-eastern and Zangezur zones and plain regions, are not satisfactory.

The sudden snowfall and the abrupt drop in temperature in April have created certain difficulties. To restore the damaged sown areas, the necessary measures are being taken everywhere. Topdressing and harrowing have been carried out on 13,600 hectares of winter areas sown with grain crops and perennial grass. Resowing is being done on the damaged areas sown with grain and fodder crops.

The sowing campaign in the republic is 15 to 20 days late as compared with last year's campaign, which can have a negative effect on the yield. Ensuring a rich and high-quality harvest demands that the sowing campaign gain in scope everywhere so that it may be completed in the shortest agrotechnical period with resowing done on all the damaged areas.

The task of party, Soviet and agricultural local bodies is to pay serious attention to a prompt and correct performance of a set of operations for the application of fertilizers, irrigation and chemical weed control, mobilizing the efforts of all field workers and machine operators, equipment and physical facilities for this work.

The sowing of vegetable and melon crops must be carried out without fail according to the established assortment, which is considered an important criterion during an evaluation of the final results of work. This stems from the need to meet the growing needs of the processing industry and the population.

The cold weather and snow that arrived unexpectedly during the second 10-day period in April have also created many difficulties for the republic's gardeners. Owing to the low temperature the opened eyelets on the grapevine and the already developed sprouts and racemes froze, which will lead to a significant harvest loss. In order to reduce the damage from frost to a minimum and to obtain a rich harvest within the limits of the possibility, extraordinary measures should be taken everywhere. Scientists, specialists and party and Soviet workers have gone to rayons to help gardeners and physical facilities and equipment have been mobilized to improve the cultivation of plants. Extensive work has been done on top-dressing and soil irrigation in gardens. The implementation of this set of operations in a short period and in a quality manner has now become an urgent demand of the time.

On the republic's farms right now it is necessary to take extraordinary measures with a view to being fully ready for the important campaign of treating gardens. It is necessary to prepare equipment and to acquire a sufficient number of treating facilities.

Everything that is possible should be done to preserve the future harvest.

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CSO: 1824

CORN CROP PRODUCTION PROBLEMS IN ROSTOVSKAYA OBLAST

Moscow SOVETSKAYA ROSSIYA in Russian 21 May 80 p 1

[Article by V. Zanozin, Rostovskaya Oblast: "For Improved Ears of Corn"]

[Excerpts] As is generally the case in the Don River region, the difficulties encountered during the past livestock wintering period in Yegorlykskiy Rayon were associated with a considerable shortfall in feed last year. Corn satisfied the grain and silage requirements by a bare 50 percent. But some kolkhozes and sovkhozes endured the wintering period in a satisfactory manner: they had laid away ample quantities of forage.

"The differences in the cropping power of the forage crops" commented the 1st secretary of the rayon party committee, N.N. Golovko, "resulted from the fact that the farmers themselves "assisted" the drought conditions by virtue of their lack of organization, their violations of the agricultural practices and their low field culture. We analyzed the blunders very thoroughly and today we are conducting the competition under the slogan "Badge of quality for the products of the fields and farms."

This year, for the very first time, the grain corn in Yegorlykskiy Rayon will be grown in accordance with an industrial technology.

Today there are many concerns out on the fields. Indeed, in addition to growing corn in accordance with an industrial method, ears will be grown for grain on 2,400 hectares, with corn fodder from 9,000 hectares being placed in silage trenches. High obligations have been undertaken in Yegorlykskiy Rayon. The decision has been made to obtain 35 quintals of corn grain per hectare and on "industrial tracts" -- 50 quintals per hectare, and fodder -- 250 quintals per hectare.

Strict observance of the entire complex of agricultural practices associated with the growing of corn is viewed as law in Myasnikovskiy Rayon. Here a great amount of attention is being given to organizing the labor of people and improving material stimulation and moral incentives. A number of awards have been instituted for the winners of competitions: prizes, the title of "best corn grower," diplomas, Book of Honor and the recently established badges of quality for plowing.

The Don region machine operators are fully resolved to obtain an outstanding harvest this year. But the fact of the matter is that all too often the necessary equipment is lacking. The teams do not have an adequate number of special disk harrows, cultivators, water distributors or sprayers.

Nor is all going well with regard to personnel. It would appear that the overall picture is not alarming: the plans called for approximately 3,200 individuals to undergo agronomic training at kolkhozes and sovkhozes and more than 4,500 machine operators were trained. Such rayons as Dubovskiy, Krasnosulinskiy, Yegorlykskiy and others exceeded their planned goals by 3-4 times. But Tsimlyanskiy, Zavetinskiy and Tarasovskiy rayons fulfilled their tasks by only 50 percent.

According to the specialists, corn in the Don River region was a "success" only during the year before last. At that time, an average of 30.1 quintals of grain per hectare was obtained. But there is nothing to rejoice over here: very little was harvested for grain -- 77,000 hectares, and the cropping power on many farms was low.

This year the golden ears will be cultivated on 200,000 hectares in Rostovskaya Oblast by 1,500 teams. Time is very dear at the present time, since spring was late and it is still not being used in a thrifty manner: by the end of the second decade in May, the corn had been planted on only one half of the planned areas. The corn growers in Kasharskiy, Oblivskiy, Sal'skiy and other rayons have clearly fallen behind in their work. Meanwhile, up until recently the sowing of this crop in accordance with the industrial technology had not yet commenced in Ust'-Donetskiy, Aksayskiy and Bokovskiy rayons.

The Don region corn growers are under an obligation to intensify their work tempo, raise the quality of their sowing work and constantly increase their army of golden ear specialists, who this year resolved to obtain the highest harvest for the five-year plan.

7026
CSO: 1824

CORN PRODUCTION IMPROVEMENTS REQUIRED IN ROSTOVSKAYA OBLAST

Moscow SEL'SKAYA ZHIZN' in Russian 18 May 80 p 1

[Article by Yu. Maksimenko, Rostovskaya Oblast: "For Improved Ears of Corn"]

> [Excerpts] The farmers in the Don River region plan to produce 1 million tons of corn this year. This valuable crop will be sown on 765,000 hectares throughout the oblast. For the very first time, corn will be grown on large areas using the industrial technology.

The steady rainfall during the month of May has generously watered the arable land of the kolkhozes and sovkhozes in the Don region. Scarcely had the land dried out than the machine operators moved their row units out onto the fields. The field work has entered a new and important stage -- the planting of corn, sorghum, sunflowers, soybeans and fodder beets has commenced and fields that were planted earlier are now being tended.

"There is a good supply of moisture and it will be a fine corn year" such was the opinion expressed by the farm leaders, agronomists and machine operators with whom we met. At many kolkhozes and sovkhozes, these forecasts were based upon a great amount of work that had been carried out in connection with making preparations for sowing the corn, which in combination with valuable protein crops, will be a leading factor in the creation of a full-value feed base for animal husbandry. The initial tens of thousands of hectares of grain corn have been sown. In all, it will be sown on 765,000 hectares throughout the oblast, with the industrial method being employed on a portion of this area.

Zernogradskiy Rayon is one of the largest producers of corn. As a result of a complex of organizational and agrotechnical measures being employed -- plantings following the best predecessor crops, use of highly productive regionalized hybrids and raised dosages of fertilizers, herbicide applications and timely harvest operations -- the corn yields are steadily increasing.

"For several years now, we have been employing industrial methods in the growing of our row crops" stated the 1st secretary of the Zernogradskiy

Rayon Party Committee and Hero of Socialist Labor, I.S. Nazarov, "the extensive application of the Moldavian experience will enable our corn growers to achieve even better results. This year the industrial method will be employed on 5,500 hectares. This new work is receiving wide support.

On plantations where the Moldavian experience is being followed, the proper technology is being used in a very strict manner. The agronomic service of the kolkhoz is exercising strict control over the entire cycle of field work and it is monitoring the efficiency, quality and schedules for carrying out this work and especially the correct placement and mixing of the herbicide liquid with the earth. The seed is being placed in soil that is well cultivated, fertilized and treated with a preparation.

The planting of row crops is being carried out in an organized manner by mechanized detachments and teams on all farms in Zernogradskiy, Sal'skiy, Azovskiy, Neklinovskiy and Tselinskiy rayons. And the industrial method was employed in these rayons on considerable areas. On many farms, plans are consistently being carried out in connection with tending the crops, preparing for the harvest operations and building covered thrashing floors and sheds and corn dryers; all of these measures will make it possible to protect the ears and grain against losses.

Nevertheless, it must be admitted that not all of the farms have received the machines, implements and fertilizers planned for the introduction of the new technology. Nor has the organization of the mechanized teams been well thought out in all areas.

The corn yields in the Don River region are increasing. But the difference between the average oblast indicator and the results of leading farms is very great. The yields being obtained by the best teams and farms are two times higher and under irrigation conditions the experts are obtaining 100 and more quintals of corn grain per hectare. In pursuit of their goal of producing 1 million tons of corn grain, the farmers are persistently mastering leading experience and the new technology for obtaining high and stable yields. It is in this regard that they require more active assistance and support on the part of the specialists, scientists and agricultural organs.

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CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

SNOWSTORM IN ARMENIA--This spring the weather in Armenia is capricious as never before. Heavy snow fell unexpectedly in the republic in April. The thickness of its cover exceeded 20 cm here and there. Such a thing has not been observed in the last 100 years. The heavy snowfall did damage to the fields turning green, vineyards and peach and apricot trees. The element destroyed certain mountainous departments. Perennial grass and grain crops were under snow. It seemed that the weather calmed down. But a big hail fell in Abovyanskiy Rayon a few days ago and it did not melt for 3 hours. The republic's workers are taking every measure to save the future harvest. Urgent agrotechnical measures are being completed on Armenia's kolkhozes and sovkhozes. Perennial grass is being resown with annual and silage crops. In vineyards vines are being cut repeatedly and topdressed so that additional buds may be opened. Livestock barns have been fully restored. Urgent assistance with fodder is given to the farms that suffered from the snowfall. [Text] [Moscow TRUD in Russian 22 May 80 p 4]
11,439

SOWING CAMPAIGN IN GEORGIA--The sowing campaign is gathering strength in the republic. On 31 March the spring wedge has already occupied 55,882 hectares--approximately one-sixth of the entire sown area. A total of 6,868 hectares of grain and pulse crops (without corn), 4,626 hectares of sunflowers for grain, 9,719 hectares of vegetables, 20,418 hectares of annual grass and 1,223 hectares of fodder root and fodder melon crops have been sown. The rates of work are not high--the whims of this spring are reflected in this. The maximum organization and a highly productive utilization of equipment will help farmers to complete the sowing on the agricultural dates set. A specific goal--to consolidate and surpass last year's results--is set for every kolkhoz member, sovkhoz worker and specialist. Tasks of great importance are set for our grain production. Despite the fact that the republic overfulfills grain procurement plans every year, the underfulfillment of grain production plans has become systematic. This is reflected not only in the economy of farms, but also in the provision of livestock breeding with high-grade fodder. We do not have the possibility to expand the areas under grain crops and to increase gross output on this basis. Moreover, a tendency toward an annual reduction in their areas as a result of an expansion of the establishments of perennial plantings has been observed. That is why the problem of increasing the yield of grain crops requires the most serious attention. /Excerpts/ /Tbilisi ZARYA VOSTOKA in Russian 8 Apr 80 p 1/ 11,439

SPRING FIELD WORK--Astrakhanskiy Rayon, Tselinogradskaya Oblast. Spring is warm now, and all the weeds have come up. An an experiment, on clear areas we ran SZS-2.1 seeders with teeth over the stubble background which had been untouched since fall. We were convinced that such minimalization of preparations has a very favorable effect on the yield. We are cultivating the remaining fields selectively with KPE-3.8 and KPSh-9 cultivators. [Excerpts] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 24 May 80 p 1] 7990

RICE CROP--Bakanas, Alma-Atinskaya Oblast. The field-crop growers in Balkhashskiy Rayon have completed the rice planting on an area of 10,350 hectares. The check plots have already been flooded on more than 9,000 hectares of plantings. Shoots have already turned green on the check plots planted first on the Bakhbakhtinskiy and Akdalinskiy sovkhozes. The teams have started to care for the plantings. [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 24 May 80 p 1] 7990

DRAINAGE PROBLEMS--Kyzl-Ordinskaya Oblast. All seven field work brigades of the Sovkhoz imeni Il'ich are planting rice. The pace is far above that of last year. More than two thirds of the planned 3,100 hectares have been planted. The Sovkhoz imeni Il'ich belongs to the Trust of the Kzyl-Orda Construction-Production Association of Glavrissovkhozstroy [expansion not available]. The land, the irrigation system, and hydraulic engineering equipment here were prepared for spring on time. Therefore, the farm workers are convinced that they can attain the planned goals. The farming season is also in full swing on the trust's other sovkhozes. They face the task of planting 24,460 hectares. Agricultural workers are currently obligated to harvest 48 to 50 quintals of unhulled rice per hectare compared to a planned total of 43 quintals. However, matters are not proceeding at a normal pace on all the rice crop rotation areas. A large part of the more than 40,000 hectares which require engineering support has become boggy and salinized and is yielding poor harvests. More than ten vertical drains were built some time ago to conserve the fertility of the land included in the plan. Unfortunately, more than one year has elapsed since their completion and these structures have yet to begin to function. One would think that the Kzyl-Orda Trust of the Construction-

Production Association sovkhozes of Glavrissovkhozstroy would take measures to utilize the completed drainage system. [Excerpts] Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 24 May 80 p 1] 7990

FLOODED FIELDS--Kokchetavskaya Oblast. Currently they are having a difficult spring in Kellerovskiy Rayon. The fields are literally flooded. About 7,000 hectares designated for spring crops are under water. The excess moisture has necessitated detours around low places during the sowing. This explains the slow pace and low quality of the sowing. But work is proceeding strictly according to schedule on the majority of the farms; they are holding to optimum sowing periods. The rayon had completed planting potatoes and sowing sunflowers and perennial grasses for silage by 15 May. This made it possible to proceed on time to the mass sowing of wheat. Kellerovskiy Rayon has set a good pace for the spring work. Wheat has been sown on over half the areas designated. It must not be said that everything is going smoothly for the Kellerovskiy people. Violations of agricultural practices have occurred on the Zarya Kolkhoz. But such cases are rare in the rayon. The grain growers have pledged to complete the sowing of wheat by 25 May. They are holding to their pledge. [Excerpts] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 24 May 80 p 1] 7990

RAINS IN KAZAKHSTAN-- Karagandinskaya Oblast. The Osakarovka grain field occupies a special place in central Kazakhstan. Good harvests are consistently obtained here. For example, last year many sovkhozes attained a level of 20 quintals and the rayon average was over 17 quintals per hectare. The grain growers met their five-year plan ahead of schedule. This year the agricultural workers have resolved not to yield the positions they have won. The favorable spring rains have inspired confidence in success. But at the same time the weather has forced the work to be done under greater pressure than usual. It has become necessary to work the soil in a very short time period so as not to miss the best period for the sowing. The machine operators, organized into complex detachments, are successfully completing this work. The rayon grain growers have now pledged to deliver no less than 100,000 tons of grain to the state. This is already on the record for the future five-year plan. [Excerpts] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 23 May 80 p 1] 7990

GRAIN SOWING--Pavlodarskaya Oblast. The extensive sowing of grains is in full swing in the southern rayons of Pavlodarskaya Oblast. Well moistened soil offers the agricultural workers the hope of a good harvest. [Excerpt] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 21 May 80 p 1] 7990

QUALITY SEEDS--Karaganda. Grain seeds have been sown on 40,000 hectares of well-prepared moist soil. Highly certified seeds are being sown in the oblast by anti-erosion seeders equiped with cultivator teeth for weed cutting. Mineral fertilizers are being applied along with the seeds on many farms. Mechanized detachments have been reinforced by powerful Kirovets tractors with five seeders each; much significance is attached to adding fertilizers to the furrows with the seeds. [Excerpt] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 20 May 80 p 1] 7990

SUNFLOWER CROP--Alma-Ata. The agricultural workers in Vostochno-Kazakhstanskaya Oblast, the main zone for raising sunflowers for grain in the republic, have passed a difficult test imposed by bad weather. In a period of 80 hours they finished sowing this valuable oleaginous crop. Sowing units in the Semipalatinsk and Pavlodar areas of the Priirtysh'ye are working on the last thousands of hectares. Advancing to the northern rayons, this crop occupied more than 100,000 hectares, 4,000 more than last year. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 20 May 80 p 1] 7990

GRAIN SOWING IN KAZAKHSTAN--Machine operators began the mass sowing of grains in Eastern Kazakhstan after the warm rains. The most rapid pace of sowing is in Glubokovskiy Rayon. Wheat, the main food crop, is located on 70 percent of the plowland here at present. Workers on the Ul'binskiy Sovkhoz, initiators of socialist competition among oblast grain growers, were the first to report completion of the sowing. The sowing was completed here in seven work days. Machines operators on all farms are currently carrying on field work at the level of the leading workers. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 24 May 80 p 1] 7990

KAZAKHSTAN SOWING PROGRESS--Astrakhanskiy Rayon, Tselinogradskaya Oblast--Our rayon was the initiator of the oblast's graingrowers' competition for exemplary preparation and high-quality performance of the spring sowing. The grain area exceeds 280,000 hectares. Fifty-five technological complexes, created on the basis of brigades, are working on the farms. The rayon's graingrowers obtained last year a record yield exceeding 18 quintals of grain per hectare. This year they are trying to build on their success by laying a solid foundation for the new crop. [Excerpts] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 27 May 80 p 1] [7697] Alma-Ata--Yesterday sowing of grain and leguminous crops was completed by Kazakhstan's farmers. The sowings exceed an area of 23 million hectares. Working according to the Ipatov method, machine operators on separate days sowed 1.5-1.7 million hectares of fields. [Text] [Moscow TRUD in Russian 31 May 80 p 1] 7697

GOOD SOWING PERFORMANCE--The republic's farmers sustained a big labor victory and laid a good foundation for the harvest in the last year of the five-year plan. The sowing of wheat on an area exceeding 15.4 million hectares was completed in optimal time. Basically only strong and hard varieties were sown. High-standard seeds went into the soil. On all the farms sowing proceeded in a most friendly atmosphere. Pacemaking machine operators completed one and a half to two norms to a shift. Daily production on the Kirovets tractors reached 110-140 hectares. The equipment, as a rule, was was used on a two-shift basis. Many farms completed their sowing in 5-7 workdays--the work, which was organized on the large-group method, proved its effectiveness. Among the machine operators, a competition got started with the slogans "For each field, the Seal of Quality" and "For the last year of the five-year plan, the full-weight ear of the virgin lands." The sowing of barley and other grain crops is continuing. Many farms have started on fodder procurement. [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 27 May 80 p 1] 7697

NEW WHEAT VARIETIES--Kokchetav--The new varieties of strong wheat--Tselinnaya-21 and Omskaya-9--will make a solid addition to the harvest. This year they are being regionalized on the oblast's farms. As shown by state tests, both varieties exceed in yield Saratovskaya-29, which is the most prevalent wheat here, by an average of 2-4 quintals of grain per hectare. The new varieties are resistant to drought, diseases and pests. Stepnoishimskaya and Ruzayevskaya experimental stations have sent large batches of Tselinnaya-21 and Omskaya-9 to the oblast's sovkhozes and kolkhozes. [Text] [Moscow GUDOK in Russian 4 Apr 80 p 1] 7697

A HIGH SOWING TEMPO--Altayskiy Kray--The Altay farmers are carrying out their field work at a high tempo. The sowing of early grain crops and the planting of sugar beets have already been completed. The mass sowing of the principal food crop -- wheat -- is in progress at the present time. This year the kray's grain crops will be sown on 4,700 hectares, with the decision having been made to obtain 16 quintals of grain from each hectare. During the busy spring season, the farmers are making extensive use of the achievements of the agronomic service and leading experience. [Excerpt] [Moscow TRUD in Russian 23 May 80 p 1] 7026

BLAGOVESHCHENSKIY RAYON FIELD WORK--The field work in Blagoveshchenskiy Rayon is being carried out by 180 mechanized teams that have been combined in 38 complexes. Spring was delayed in arriving in the Kulundinskaya Steppe this year and the moisture supplies in the soil are not very plentiful. Thus the pause between the pre-sowing tilling of a field and sowing must be reduced to a minimum. In striving to carry out their work during the best periods, the machine operators must not forget one principal factor: each operation in the field must be carried out in a high quality manner. [Text] [Moscow TRUD in Russian 23 May 80 p 1] 7026

ALTAY GRAIN SOWING OPERATIONS--From the foothills of the Altay Range to the snowy expanses of Kulunda, the farmers in Altayskiy Kray are carrying out the mass sowing of grain crops. The spring crops must be sown on an area of 4.5 million hectares on an accelerated basis. [Excerpt] [Moscow IZVESTIYA in Russian 21 May 80 p 1] 7026

PRIMORSKIY KRAY RICE PLAN--Primorskiy Kray--This year the rice growers in Primorskiy Kray have vowed to obtain no less than 30 quintals of grain from each of 44,000 hectares and to sell 86,000 tons to the state. The cold and delayed spring period has confronted the farmers with many problems and yet they are countering the caprices of nature with their diligence, expertise and progressive agroctechnical methods. In all areas the machine operators are working in two shifts. Many of them are over-fulfilling their shift tasks by one and a half times and in a high quality manner. The Primorskiy Kray rice growers are striving to complete their sowing of the principal agricultural crop during the best periods -- prior to 20 May. [Excerpts] [Moscow TRUD in Russian 13 May 80 p 1] 7026

POOR QUALITY REPAIR WORK--Omskaya Oblast--For grain growers, the start of the sowing campaign is a great event. However, it produced a number of problems for the chairman of the Zarya Kommunizma Kolkhoz in Odesskiy Rayon, A. Titov, and also for the farm's entire collective. The first alarm signal was supplied by tractor operator V. Narochniy. His powerful Kirovets succenly stopped. Subsequently, seven more tractors broke down. "The breakdowns did not occur at the same farm" stated the deputy chief of the oblast agricultural administration, A. Davydov, "moreover, they were caused by low quality repair work. There are approximately 4,000 Kirovets tractors in the oblast at the present time. The majority of the machines underwent repair work at a specialized plant of Goskomsel'khoztekhnika, which is located in Novovarshavskiy Rayon. However, a number of them broke down at the very beginning of the sowing work. Last autumn, having foreseen the requirement for carrying out a great volume of field work in the spring, the decision was made in the oblast to send the powerful tractors to the workshops in a timely manner. It would appear that the repair workers carried out their task with regard to restoring the machines. Apparently however, very little care was evidenced for the quality of the work. [Text] [Moscow PRAVDA in Russian 23 May 80 p 1] 7026

EARLY GRAIN SOWINGS COMPLETED--Volgogradskaya Oblast--The Volgograd farmers have successfully completed their spring sowing of early grain crops. This year the oblast's farmers have vowed to obtain no less than 20 quintals of grain per hectare. Leninskiy Rayon is located in the Zavolzh'ye region. Here the sowing of early grain crops usually commences later than in the southern zone. But this year the agricultural workers in the Zavolzh'ye region completed it almost simultaneously with the farms in the southern rayons. At the present time, the sowing of corn, millet and fodder grasses is being carried out at a rapid tempo. The warm weather which followed the frosts is favoring this situation. [Excerpt] [Moscow TRUD in Russian 13 May 80 p 1] 7026

CHELYABINSKAYA OBLAST GRAIN CROPS--This year the farmers in Chelyabinskaya Oblast are sowing their grain crops on 2 million hectares. [Text] [Moscow PRAVDA in Russian 19 May 80 p 1] 7026

BRYANSKAYA OBLAST SOWING OPERATIONS--Bryansk--The farmers in Novozybkovskiy Rayon completed their sowing of grain and pulse crops earlier than all others in the oblast. Many difficulties were created by the unstable weather. However the mechanized complexes are working without disruptions or idle time and the equipment is being employed in two shifts. The best detachments required only 70-80 hours to sow all of the early crops. [Text] [Moscow GUDOK in Russian 16 May 80 p 1] 7026

MASS SOWING OF CORN--Belgorod--The oblast's kolkhozes and sovkhozes are sowing corn on a mass basis, with 264,000 hectares of land having been set aside for the principal fodder crop -- considerably more than in past years. Of this area, 80,000 hectares will be occupied by early ripening hybrids. [Text] [Moscow GUDOK in Russian 16 May 80 p 1] 7026

MULTI-PURPOSE UNITS--Minsk--The combining of many soil cultivation implements into one towed unit has enabled the Belorussian machine operators to make maximum use of the capabilities of their tractors. Today this assembly simultaneously cultivates and packs the soil, covers the seed together with fertilizers and harrows the soil. [Text] [Moscow GUDOK in Russian 16 May 80 p 1] 7026

UDMURT ASSR SOWING OPERATIONS--Izhevsk--High rates and expertise -- these are the principal signs of this year's sowing campaign in the Udmurt ASSR. At the present time, the mass sowing of spring crops is being carried out by the farmers in all rayons of the autonomous republic. Extensive use is being made of multiple-unit assemblies. The seed for grain crops has been placed in the soil on an area of 300,000 hectares -- one half of the spring grain fields in the Udmurt ASSR. [Text] [Moscow GUDOK in Russian 14 May 80 p 1] 7026

MOSCOW OBLAST GRAIN SOWINGS--Moscow--The grain growers in Moscow Oblast are raising the tempo of their field work. More than one half of the arable land set aside for grain and pulse crops has already been sown. Moreover, the sowing is being carried out in all areas using high quality seed. The work is being accelerated by extensive use of the Ipatovo method. Practically all of the farms have organized their sowing operations based upon the principle of a single field conveyer line in the oblast. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 22 May 80 p 1] 7026

SPRING WHEAT SOWING COMPLETED--Kuybyshev--The Kuybyshev grain growers completed their sowing of spring wheat during the best periods. This crop has been sown on an area in excess of 700,000 hectares. The sowing of barley, peas and sugar beets was also carried out on a rapid basis. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 22 May 80 p 1] 7026

INCREASE IN SOYBEAN SOWINGS--Khabarovsk--The sowing of soybeans -- the principal crop in the Priamur'ye region -- has commenced under complicated weather conditions. This year the soybean fields are the largest -- they have been increased by 4,000 hectares. The kray's field crop growers have vowed to complete their sowing of the "Far Eastern miracle crop" in just ten working days. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 22 May 80 p 1] 7026

ORENBURGSKAYA OBLAST FIELD WORK--Orenburg--The oblast's farmers are presently working in a very tense manner: they must carry out all of their field work on time and complete their sowing of spring crops during the best periods. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 22 May 80 p 1] 7026

LITHUANIAN SCHEDULE REVISION--The commitments of Lithuanian fieldworkers this year are to obtain an average of 28 quintals of grain per hectare, 161 quintals of potatoes, 252 quintals of sugar beet and to procure for the winter period 28 quintals of fodder units per head of livestock. Spring is late. On each farm it is now necessary to carry on simultaneously sowing of grain crops, perennial and annual grasses, fodder and sugar beet, flax and planting of potatoes. Earlier compiled work schedules in Lithuania have been revised, machine operators are economizing with minutes. [Excerpt] [Moscow PRAVDA in Russia 23 May 80 p 1] 7697

SPRING BARLEY--Tashkent--The grain farmers of Tashkentskaya Oblast have begun harvesting winter barley. The enterprises are harvesting 40 quintals of grain per hectare, 15 quintals more than planned. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 29 May 80 p 1] 8228

WORKING IN A COMPLEX--Kaluga, 22 May 80--The enterprises of Kozel'skiy Rayon were among the first in the oblast to complete the sowing of early grains. Now potatoes are being planted here at a rapid pace. Mechanized links began their care of crops simultaneously. On significant areas spike crops received a supplementary top-dressing with ammonia water. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 23 May 80 p 1] 8228

WORK IN TATARSKAYA ASSR--This year is special for the workers of Tatariya. The autonomous republic is 60 years old. Farmers have decided to gladden the homeland with a weighty grain harvest. In the republic spring crops will occupy about 2.5 million hectares. Village workers began to show concern for a good harvest on this extensive area in the fall of last year. Late-fall plowing took place on all spring fields and two-thirds of the area was plowed in the best agrotechnical time--before 10 September. As a result of slow work the proportion of first class seed has increased greatly. A record amount of organic fertilizer was taken out into the fields--20 million tons. The battle for a large grain harvest in Tatariya is continuing. There are 1,580 sowing complexes in the fields, including 5,340 sowing units. Competition for scheduled sowing and for high quality of all field work is being led by the farmers of Menzelinskiy, Buinskiy, Muslyumovskiy and Arskiy rayons. Simultaneously with the sowing of grains farmers are planting potatoes and beets. [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 25 May 80 p 1] 8228

ROLE OF LINKS--Kiev, 19 May 80--In the central and northern zones of the Ukraine, where the most extensive plantations of buckwheat are found, the sowing of this crop has begun. Production concentration has enabled enterprises of Chernigovskaya, Khar'kovskaya, Kiev and other oblasts to assign special links for each field and to utilize progressive agrotechnology more widely. For example, broad-row sowing with the simultaneous application of superphosphate is very effective. Tetraploid buckwheat will be planted after afterharvest crops. At least 68-78 days are required for the maturation of the novice, which is resistant to lodging and shedding. During testing at the Izmail'skiy State Plot it surpassed the standard by over 2 quintals per hectare. The grain farmers of the republic, in assigning great significance to buckwheat, have allocated almost 350,000 hectares of plowland for it. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 20 May 80 p 1] 8228

SOWING SOYBEANS--Vladivostock, 19 May 80--The Primor'ye is second in importance to Amurskaya Oblast in the sowing of soybeans in the country. It is planned to put no fewer than 150,000 hectares of plowland in soybeans. This is almost one-fourth of the entire sowing area in the kray. A large amount of attention is being given to improving the quality of agrotechnical operations. On the eve of sowing farmers performed two cultivations on each field and applied granulated fertilizer and herbicides into the soil. Enterprises have created 170 soybean sowing complexes. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 20 May 80 p 1] 8228

COMPRESSED SCHEDULE--Kemerovo, 14 May 80--Today the sowing of pulse crops was completed in Kemerovskaya Oblast. Despite the late spring, it was completed ahead of schedule and with high quality. In the steppe rayons machine operators have begun sowing a high-yield variety of wheat, Omskaya-9. The work of complexes here is organized in two shifts. But in the oblast as a whole there is a shortage of machine operators for double shifts. For this reason kolkhozes and sovkhozes are being aided by over 2,000 upperclassmen of SPTU's [Agricultural professional-technical insiitute], who will gain practical experience in the fields under the guidance of experienced tractor operators. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 15 May 80 p 1] 8228

SUCCESS IN CORN FARMING--Kishinev, 17 May 80--The last sowing units have left the corn plantations of Moldaviya. Despite the unfavorable weather conditions, the sowing of this valuable grain-forage crop was completed on a compressed schedule that was close to optimal. This year corn is being cultivated for grain according to industrial technology, without the utilization of manual labor, on the entire area of 350,000 hectares. The creation of complex mechanized detachments has encouraged a significant growth in labor productivity. The average daily output per sowing unit has exceeded 25 hectares. Many enterprises, utilizing the great advantages of new technology, have overfulfilled sowing plans. Uniform shoots that are free of weeds are beginning to appear. This attests to the high quality of all operations, including herbicidal treatment. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 17 May 80 p 1] 8228

UNIFORM SHOOTS--Kurgan, 29 May 80--The grain farmers of the Zaural'ye have completed the sowing of wheat. Work was especially well organized in the enterprises of Safakulevskiy, Petukhovskiy, Tselinnyy, Kurtamyshskiy and Ketovskiy rayons. Weather conditions are favorable. On fields that were sown early uniform and even shoots of early grains and feed crops have appeared. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 30 May 80 p 1] 8228

CSO: 1824

LIVESTOCK FEED PROCUREMENT

PROGRESS, PROBLEMS IN IMPROVING PASTURES IN BELORUSSIA

Minsk SEL'SKAYA GAZETA in Russian 27 Apr 80 p 2

[Article by G. Rabtsevich, chief, Meadow and Field Feed Production Division, Belorussian SSR Ministry of Agriculture; A. Chernyak, division chief agronomist: "Meadows -- Rich Resource"]

[Text] This year the farms of this republic are to increase feed supplies to 21 million tons, converted to feed units, and 2.2 million tons of digestible protein. Only if this is achieved will the feed requirement of our livestock operations be met.

An exceptionally important and difficult target has been assigned. And a major role in achieving this target will be played by meadow pasturage and haymeadows, which comprise 35.8% of all agricultural acreage in this republic. We must state that we possess a considerable quantity of improved land — 1,880,000 hectares. An entire aggregate of drainage and soil-improvement measures has been carried out on this acreage. The result is creation of water-air conditions which are favorable for grass growth, which makes it possible to produce more forage at less cost.

The potential of meadow acreage, however, is not yet being adequately utilized in this republic. First of all, a large number of rayons still have only 20-30% improved haymeadows and pastures. This is not a normal situation. And the degree of improvement of this feed-producing acreage of course determines to a significance degree its productivity. And the degree of improvement is exceptionally low.

This is why an important place in the system of measures to maintain improved meadow pasturage in a high-productivity state is occupied by their prompt regrassing. As indicated by studies conducted by scientific establishments and the practical experience of kolkhozes and sovkhozes, with the existing level of application of organic and mineral fertilizers to meadow acreage sown to grass mixtures, it is essential to regrass each year approximately 20% of improved haymeadows and pastures.

Unfortunately many kolkhozes and sovkhozes devote little attention to regrassing of degenerated grass stands. Utilization of grass stands for a period of 8-10 years as a rule leads to a sharp decline in productivity and worsening of the botanical composition of grasses. As a result, farms sustain unwarranted losses of the most inexpensive summer forage and put away little feed for the winter confinement period. A particularly poor job of utilizing such feed-producing acreage is being done by the farms of Smorgonskiy Rayon. Improved haymeadows and pastures in this rayon comprise 67.7%. Each year only 6-8% are regrassed. No regrassing at all has been done in the last 3 years on the Smorgonskiy Sovkhoz and Put' Il'icha Kolkhoz.

Availability of the basic nutrient elements in the soil around the grass roots constitutes the basis for obtaining high yields in improved haymeadows and pastures, particularly nitrogen. A special role is played by organic fertilizers, application of which, with radical improvement and regrassing, sharply extends the productive life of meadows and boosts plant resistance to adverse growing conditions.

Mineral fertilizers are still being applied to meadows in extremely inadequate quantity. In recent years application has been at an average rate of 50 kilograms of active ingredient per hectare for all haymeadows and pastures, including 20-30 kilograms of nitrate. By failing to apply the required quantity of mineral and organic fertilizers, farms do great detriment to feed production. In many cases the enormous capital spending on improving meadow acreage fails to produce the required economic effect.

And yet even with presently-allocated mineral fertilizer stocks, considerably larger quantities could be applied to meadow acreage. One reserve potential lies in redistribution of fertilizers among farm crops. It is a well-known fact that in many instances excessive fertilizer doses are applied to grains and potatoes (300 kilograms per hectare applied). At the same time research conducted at the Belorussian Scientific Research Institute of Grain and Grain Products indicates that on the average 200-220 kilograms of active ingredient is an economically warranted dosage in this republic. Application of mineral fertilizers to potatoes could be reduced. The results of a three-year full-scale experiment conducted on 24 farms in this republic attest to the fact that such a redistribution of mineral fertilizers will not lead to decreased grain and potato yields. By redistribution, these farms have boosted hay yields to 40-50 quintals per hectare and have not experienced a decline in grain and potato yields.

Meadow and pasture grass seed production plays an important role in the system of measures to improve productivity of feed-producing acreage. Each year this republic's farms need more than 26,000 tons of seed, including more than 8,000 tons of legume seed, for field and meadow grass seeding. The problem of producing grass seed in the required quantity and variety has not yet been resolved. Farms are only 32-percent supplied this year with their own legume seed for planning. White clover and Swedish clover are practically of unparalleled value as leguminous plants for haymeadows and pastures.

In spite of the fact that grass seed stocks are considerably larger, seed stock variety fails to meet production requirements. There is very little seed available of the following grasses: awnless brome grass, reed fescue, reedgrass, meadow foxtail, and Kentucky bluegrass. It is therefore essential to achieve greater specialization of grass seed production operations and increase concentration of seed crops.

This year considerable work is targeted for improving forage-producing acreage. Plans call for radical improvement of low-productivity natural haymeadows and pastures totaling 135,000 hectares, including 6,000 hectares with irrigation. In addition, plans call for regrassing previously improved meadows totaling 360,000 hectares.

This is why it is necessary for all farms to draw up forage production plans and schedules for harvesting green fodder and grass from meadow acreage and to determine grass stand mowing schedules. It is important to determine in detail periods of incomplete supply of bulk green feed for livestock from meadow feed production and to ensure timely planting of field feed crops in order to alleviate the livestock feed shortage.

Each and every hectare of meadow should work under full load.

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LIVESTOCK FEED PROCUREMENT

MISMANAGEMENT IN COLLECTION OF FOOD SCRAPS FOR FEED IN GOMEL' SCORED

Minsk SEL'SKAYA GAZETA in Russian 17 May 80 p 2

/Article by N. Yermakov, correspondent of SEL'SKAYA GAZETA, Gomel': "When There Is No Coordination"/

/Text/ A special truck stops in front of the residential houses on Privokzal'naya Street in the city of Gomel' at a strictly appointed time every day. The following picture can be observed there every day. Together with the household garbage tenants throw out pieces of bread and other food scraps.

Such mismanagement occurs, because house administration No 21 did not see to it that additional feed, which many kolkhozes and sovkhozes located near the oblast center need badly, is collected.

The experience of many farms indicates that scraps are quality feed. On the Kolkhoz imeni Lenin in Gomel'skiy Rayon large-horned young cattle gains 800 grams and more every day. On the fattening Yuzhnyy Sovkhoz in the same rayon more than 15 percent of the feed prepared from grain is replaced with food scraps. Food leftovers from dining rooms, coffee houses and restaurants are successfully used on the Krasnogvardeyets, Kommunist, 1 Maya and other kolkhozes.

All kolkhozes and sovkhozes in Gomel'skiy Rayon express the desire to receive as many food scraps as possible. In the opinion of farm managers, such a possibility exists. A special oblast office for the collection of unplanned feed has been established in the city. Transport facilities and some funds are allocated for it. However, the problem is that up to now there has been no coordination between it and the city's house administrations. The office is interested in receiving more scraps, but some house administrations consider this to be a burden, although it should be noted that house managers and technicians receive additional pay for the collected feed. In many places it is not considered necessary to promptly select people for bringing scraps down from the floors of multistory houses. In houses No 11 on Staro-Chernigovskaya Street and No 94 on Kirov Street scraps have not been collected regularly for the second month now.

Sometimes overflowing containers, in which valuable feed rots, are not emptied for a week and a half. On the other hand, on some days 2 to 2.5 tons of scraps are removed from there. It should be noted that, essentially, these scraps are spoiled.

"House administration No 16 is to blame for this," the oblast office explained.

We telephoned house manager N. T. Rogov.

"I haven't been here long," he answered. "Frankly, I don't know what's been going on. I will try to look into things."

He "has been looking into things" for two weeks now. Disorder has increased during this time. Scraps from three nine-story houses on Sortirovochnaya Street have not been removed for a long time. The reason: lack of a waste collector.

Of course, the examples cited do not give a complete picture of the situation that has been created. The list of house administrations and individual houses where a careless attitude toward the procurement of additional feed is tolerated can be continued. In practice, every microrayon and every street have their "hot" points. At first people try to collect food leftovers, but, noting that no one is especially concerned with them, throw out bread, potato peels and egg shells into the garbage chute or to the special trucks that come to take the garbage. Thus, the scraps received by kolkhozes and sovkhozes are sharply reduced. For example, whereas 30 tons of scraps were collected in the city in January, only 26, in March.

"On the whole, we are fulfilling our plan," said I. Semenushkin, chief of the oblast office. "What more is needed?"

In fact, according to the report data, last year's general assignment was fulfilled. But, of course, this is not the point. Minor calculations convinced us that no more than one-third of what the city residents can give kolkhozes and sovkhozes is used according to purpose and the rest is dumped. A considerable part of the unplanned feed is taken from fruit and vegetable depots and the wine making plant, because there is less trouble there. A truck is sent, what these places offer is loaded on it and that's the end of the matter.

The search for easy ways led to the fact that last year all the rayons in the city of Gomel' failed to deliver a large amount of food scraps, which should have been collected from the population, to kolkhozes and sovkhozes. In particular, Zheleznodorozhnyy Rayon failed to deliver 493 tons and Sovetskiy Rayon, 431 tons. A similar situation was also observed during the first quarter of this year.

The problem is that many house administrations do not see to it that scraps are collected promptly and that people are selected to ensure this important part of the work. On its part the oblast office does not ensure an efficient removal of what has been collected. For example, in house administration No 10 people complain that almost everyday they have to telephone and ask that a truck be sent to pick up the scraps. In turn, the oblast office is angry at house administrations, because trucks travel in vain along some routes--containers with scraps are not taken out from houses to the place agreed on. In brief, there is a great deal of confusion in this fundamentally important matter. Instead of carrying on propaganda among the people for the need to collect food scraps, the reverse is true.

Will this situation continue for a long time?

"We don't know," people at house administrations said. "As is often the case, the first quarter has passed and we still don't have the annual assignment."

How then can there be order?

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LIVESTOCK FEED PROCUREMENT

OIL RADISHES SUGGESTED FOR LIVESTOCK FEED IN MOSCOW AREA

[Editorial Report] Moscow LENINSKOYE ZNAMYA in Russian on 4 April carries a short article on page 2 which states that row crops for feed are an important source for augmenting livestock feed supplies. Oil radishes in particular are cited for their rapid ripening and cold resistance. They are a high yielding crop: 150-400 quintals of green mass per hectare. The remainder of the article is devoted to harvesting advice and more precise details on the nutrient content of oil radishes.

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LIVESTOCK

PROBLEMS IN DAIRY INDUSTRY IN VOLGA AREA

Moscow SOVETSKAYA ROSSIYA in Russian 23 May 80 p 1

[Article by V. Lysenko: "Drops in Milk Output"]

[Text] To ensure the further increase in production and procurement of milk means doing one of the most important tasks set by the November (1979) Plenum of the CC CPSU for agriculture. Despite the unfavorable weather conditions of the recent winter, many kolkhozes and sovkhoses of the republic produced and sold more milk than one year ago and increased the head of cattle. But on the whole for the Russian Federation, towards the middle of May, as the RSFSR Central Statistical Administration reports, only 55 percent of the overall volume of purchases in milk according to the plan was carried out during the first half of the year. In comparison with the same period last year, they were approximately 800,000 tons short in products, including 127,000 tons of products not submitted by animal husbandry workers in the Volga area.

According to the results of the first quarter, the Challenge Red Banner of the RSFSR Council of Ministers and the All-Union Central Council of Trade--Unions and the first monetary prize were given to the Tatarskaya ASSR for the increase in production and procurement of animal husbandry products and for increasing the productivity of livestock and poultry. In the middle of May the rates here did not decrease. This is the only area of the Volga where the amount of milk purchased was more than the previous year.

On the whole in the region, one must admit, that the dairy farms are developing weakly. The facts attest to this. Only 90 percent of the plan for the first quarter for procurement was carried out. The farms of Saratovskaya, Penzenskaya, Ul'yanovskaya, and Astrakhanskaya oblasts and the Kalmytskaya ASSR, where only 78-86 percent of the tasks were carried out and the level of purchases was reduced by 14-31 percent, are in debt to the government. The procurement of milk in April has slowed down even more and in May the situation was being corrected too slowly.

Besides this period in the concluding year of the five-year plan farm workers of the Volga area must sell almost 4,900,000 tons of milk, that is, 5.2 percent more than last year. A serious lag in the first one and a half quarters complicates the task and the rates of increase must be multiplied by more than two for what was intended.

What interrupts the business? First of all it is the low productivity of the cows. On the average in the Volga area farms, in the course of four months, 578 kilograms of milk is taken from each cow--52 kilograms less than in 1979, while on the farms of the Kuybyshevskaya, Penzenskaya, Ul'yanovskaya, Saratovskaya, Astrakhanskaya oblasts and the Kalmytskaya ASSR the amount of milk taken was reduced by 60-180 kilograms. In this step backward many inadequacies were expressed in concentrated fashion: both the poor feed of the dairy herd and the weak organization of the mass milking of cows and breeding work.

But there are other obstacles in the path of increasing milk production and primarily the extremely slow growth of the number of cattle. On the whole for the area it has remained at last year's level although in the Ul'yanovskaya and Volgogradskaya oblasts and the Bashkirskaya ASSR it grew somewhat while on the farms of the Astrakhanskaya, Penzenskaya, Saratovskaya oblasts and the Kalmytskaya ASSR it decreased. Apparently, the time has come to increase capital investment for expansion, for the reconstruction of existing and for building new facilities for replacement herds, for additional organization of farms for raising future cows. The interests of the business requires such rates of cattle production in order that annually an increase of dairy cattle be insured within the boundaries of 3 to 4 percent.

All of these problems can be more easily solved where a progressive shop--flow-line system of housing animals is implemented. On the Progress Kolkhoz of the Kuybyshevskaya Oblast, where they have been working at it for two years, they have been receiving high yields of milk--about 3,600 kilograms and 114 calves per 100 cows. This is not a bad result and a weighty argument in favor of the progressive technology. But it was advantageously evaluated only in the Kuybyshevskaya and partially in the Saratovskaya oblasts; it is particularly successfully implemented in Tatariy. In other areas of the Volga area, they have hardly attempted to use this resource.

The problem of the quality of the milk still remains a pressing issue. Although in a number of areas in the region, for example in the Penzenskaya Oblast and Tatariy, they were able to go forward somewhat and increase the share of top grade products by up to 85 percent. On the whole in the area the situation is not good: the Astrakhanskiy and Kalmytskiy farms sell too little of it.

Here is another channel of "milk loss." Due to the low level of fat in the milk, the kolkhozes and sovkhozes of the Penzenskaya, Ul'yanovskaya, Saratovskaya oblasts and Bashkiriya from 4 to 9 thousand tons were not included in the plan, that is, about 5-8 percent of the overall quantity of the products submitted.

The development of dairy animal husbandry at the present stage is not possible without the specialization and concentration of production on the basis of inter-economic cooperation and agro-industrial integration. What kind of an example is being given by the Volga area signals for the farms--dairy complexes which numbered over 150 in the area? Unfortunately, many of them operate at half capacity. The explanation is found in the fact that one out of three of them does not have a full complex of cows. The projects stipulate the productivity of each animal at the project to be 3,500 kilograms of milk; however, this level is reached only at 11 of them and at 12 of them they get slightly over 3,000 kilograms.

The animal breeders of the Volga area have at their disposal all of the opportunities in order to improve the efficiency of dairy production to the level required by today. The nearest task is to successfully complete tho transfer of the cattle to pasture land, achieve the highest productivity of cows during the summer, make up for losses during the first months of the year and successfully manage the plans and obligations.

Attention: disturbing figures!

During the 4.5 months the farms of the Volga area were short in their delivery of milk to the state in the amount of 127,000 tons in comparison with the same figure of last year.

The Saratovskaya, Penzenskaya and Astrakhanskaya oblasts were short 73,000 tons.

Fifty-five percent was the figure of the carried out portion of the plan for the six months in milk procurement.

Fifty-two kilograms was the amount not received of milk from each cow compared with last year.

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LIVESTOCK

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WHY BEEF PRODUCTION IS NOT PROFITABLE FOR ALL KOLKHOZES

Sverdlovsk URAL'SKIYE NIVY in Russian No 11, Nov 79 pp 24-26

[Article by A. Chichilov, minister of Agriculture, Urdmurt ASSR; R. and V. Trikoz, lecturers at the Izhevskiy Agricultural Institute]

[Text] Presently, the meat problem is of urgent significance. The state is rewarding farms which strive to increase meat production, including beef, with the most diverse economic measures. But not all of the kolkhozes of the Urdmurt ASSR are skillfully using the resources which have been made available, are not always correctly oriented to the economic situation.

We analyzed the activity of 240 kolkhozes in all 4 zones of Urdmurtiya--the Northern, the Southern, the Southwestern and the Suburban. In each of the zones, 6 groups of kolkhozes have been isolated on which the production cost of a quintal of meat from large horned cattle fluctuated within the following limits: up to R 140; R 140-160; R 160-180; R 180-200; R 200-220; more than R 220.

And it is known that the purchase prices are set according to the average actual production costs of a product for those farms which provide the bulk of it. We applied this principle to each zone of the republic individually, and we established that, on the average, about 60 percent of the meat (greater than 70 percent in the suburban zone), independent of the zone, is produced on those farms where 1 quintal of it requires from R 140-180. There is a somewhat different situation in the southern zone, but more about that below.

It was these groups of kolkhozes, the ones that produced the bulk of the meat for the KRS [expansion unknown], which were selected for further analysis. It turns out that there is no direct dependence between the production cost for meat from cattle and its selling price within any zone. Throughout the republic on the whole, 36 percent of the kolkhozes spent up to R 160 for a quintal of meat, while 64 percent of all farms sold it at such a price; on 52.9 percent of the farms production costs for a quintal of meat were R 160-200, while only 29.86 percent of the kolkhozes sold it at such a price.

In a word, it was revealed that production costs for a unit of production within the same group of kolkhozes can be identical, whereas the selling prices may differ significantly.

It was necessary to establish why this occurs. To this end we took the northern zone in which we isolated two groups of farms (having divided each into subgroups). We assigned 23 kolkhozes having an average selling price for a quintal of meat equal to R 148.65 and 9 kolkhozes selling meat at R 188.15 to the first group; there were 25 kolkhozes with a selling price of R 147.73 and 8 with a price of R 183.04 per quintal remaining in the second group (Table 1).

Table 1

Economic indicators for production of meat from large horned cattle by groups of kolkhozes in the northern zone of the Urdmurtskaya ASSR

Indicators	Production cost of 1 quintal of meat by group			
	R 140-160		R 160-180	
	I	II	I	II
Number of kolkhozes	23	9	25	8
Capital allocation, thousands of rubles	32	38.2	36	31.7
Agricultural land resources per worker, hectare	14.7	13.3	12.97	12.85
Production cost per quintal of meat, rubles	158.0	149.95	174.89	168.8
Average selling price of 1 quintal, rubles	148.65	188.15	147.73	183.04
Level of profitability, percent	-5.93	25.48	-15.52	8.43
Number of head sold per kolkhoz on the average	331	316	434	563
Average weight on the hoof per head, kg	262	343	220	340
Feed unit consumption per quintal of weight increase, quintals	9.74	9.8	7.87	10.11
in t. ch. [expansion unknown] of concentrates, quintals	2.03	2.45	2.4	2.63
Production costs per quintal of feed units, rubles	8.77	6.56	8.22	9.56
Grain yield, quintal/ha	11.46	16.9	11.66	10.98
Meadows and pasture per kolkhoz, ha	320	677	628	1155

A comparison of the economic indicators for the kolkhozes from the vantage point of revealing regularities for a direct dependence of production cost and selling price per unit of production on any objective production conditions whatsoever provided nothing. The difference in the capital allocation was not very great, nor was the area of agricultural land resources per worker. But the production cost per quintal of meat is lower for kolkhozes in the first group than for those in the second by R 24.94 while the average selling price is greater by R 40.42. The fact is that kolkhozes in the first group deliver cattle with an average weight on the hoof of 343 kg per head whereas in the second group it is only 220 kg. The cause is primarily in the varied level of fodder production and feeding. On kolkhozes in the first group, the average grain yield was 16.9 q/ha, while in the second it was 11.66 q/ha.

One may compare the kolkhozes of the first subgroup of group 1 with kolkhozes in the second subgroup of group II which have approximately identical capital and manpower allocations, grain yield and even fodder consumption per unit of weight increase. But the production cost of a quintal of meat on kolkhozes in the second subgroup of group II are greater by R 10 and its selling price is greater by R 34.4, a fact insuring profitable operation.

The data from Table 2 show that the farms which were under scrutiny achieved such results because of the difference in weight on the hoof per head of cattle being sold: 340 kg vs. 262 kg. It is sometimes more useful to increase the production costs for meat production somewhat and produce heavier animals. All of these questions should be resolved taking the specific circumstances of the farms into consideration. But one requirement is indispensable--to be involved in intensive production, to produce high average daily weight gains, to reduce the duration of fattening and to turn over only high-quality animals for meat. An analysis of kolkhozes in the republic's southern zone confirms this (Table 2). Here 2 subgroups of farms differing by the varied selling price were isolated within the group of farms with production costs per quintal of meat being up to R 190. For practical purposes, the farms have no great differences in the level of the intensity of agricultural production. Thus one cannot explain the difference in the production cost for producing one quintal of meat or in the (selling) price by groups of kolkhozes using objective conditions. The reason for the adequately significant difference in selling price lies in the varied level of intensity with which cattle are fattened.

On the kolkhozes of the first subgroup, there is extensive fattening of the animals, with the quantity of fodders being small. The latter is confirmed by the fact that these farms sell cattle with very low weight on the hoof per head--224 kg., hence, the low average selling price of meat--R 149 per quintal. Kolkhozes in the second subgroup succeeded in raising the average weight on the hoof per head of cattle being sold to 305 kg by intensification of the fattening process. This permitted them to turn over animals of average and above-average fattness and insured above-plan cattle sales at increased prices. Therefore the average selling price of 1 quintal of meat reached R 204.9.

Table 2

Economic indicators for meat production from large horned cattle by various groups of kolkhozes in the southern zone of the Urdmurtskaya ASSR

Indicators	Subgroups I	Subgroups II
Number of kolkhozes	9	4
Capital allocation, thousands of rubles	39.8	37.8
Agricultural land resources per worker, ha	13.6	11.9
Production cost per quintal of meat, rubles	189.0	185.7
Average selling price of 1 quintal, rubles	149.0	204.9
Level of profitability, percent	-21.2	16.7
Number of heat sold per kolkhoz on the average	424	286
Average weight on the hoof per head, kg	224	305
Feed unit consumption per quintal of weight increase, quintals	11.6	11.1
in t. ch. [expansion unknown] of concentrates, quintals	3.4	3.6
Production costs per quintal of feed units, rubles	8.97	6.35
Grain yield, quintal/he	14.9	19.8
Meadows and pasture per kolkhoz, ha	839	803

This means that when business is efficiently organized, meat production from large horned cattle may be profitable on all of the kolkhozes in the group. This position is revealed most precisely in the republic's suburban zone (Table 3).

Within the zone, two subgroups of farms sharply differing among themselves on the basis of the average selling price for large horned cattle have been isolated within the 2 groups. In the first group of kolkhozes, this difference was from R 166 to R 247 and in the second from R 151 to R 212. It was necessary to determine to what extent differences in the production costs and the selling price for large horned cattle throughout the groups and subgroups of farms depended on objective production conditions: capital allocations, manpower allocations, structure of agricultural land resources and level of feeding for the animals. It may be seen from the table that there are differences. In those subgroups of kolkhozes where there is a higher meat selling price, the capital allocation is significantly higher while the manpower allocation exceeds the indicators for the other subgroup by a factor of 2.5-3. Moreover, on kolkhozes of the second subgroup, there are significantly fewer meadows and pasturelands. Thus, kolkhozes in the second subgroup are farming more intensively. This fact is confirmed by the higher grain yield; on the whole, the conditions for fattening cattle are better on these farms than on kolkhozes of the first subgroup. Therefore the average weight on the hoof for a single head of large horned cattle sold to the state by kolkhozes in the second subgroup was 410-308 kg, but only 287-262 kg throughout the first subgroup. And since existing purchase prices for meat depend on fatness of the cattle, the average weight on the hoof and above-plan sales, they were significantly greater at kolkhozes in the second subgroup than in the first. Consequently the higher level of production intensity justifies itself economically.

Table 3

Economic indicators for meat production from large horned cattle by groups of kolkhozes in the suburban zone of the Urdmurtskaya ASSR

Indicators	Production cost of 1 quintal of meat by group			
	I	II	I	II
Number of kolkhozes	6	2	8	4
Capital allocation, thousands of rubles	35.6	42.1	38.0	43.5
Agricultural land resources per worker, ha	17.6	7.6	16.6	5.1
Production cost per quintal of meat, rubles	150.34	154.77	172.34	171.44
Selling price per quintal of meat, rubles	166.25	247.33	151.08	212.6
Level of profitability, percent	10.58	59.8	-12.33	24.0
Number of head sold per kolkhoz on the average	732	474	628	970
Average weight on the hoof per head, kg	287	410	262	308
Feed unit consumption per quintal of weight increase, quintals	8.4	8.8	10.0	8.8
in t. ch. [expansion unknown] of concentrates, quintals	2.85	2.19	2.25	2.85
Production costs per quintal of feed units, rubles	9.05	8.11	6.86	9.97
Grain yield, quintal/ha	19.0	25.3	15.61	18.95
Meadows and pasture per kolkhoz, ha	1394	383	2042	918

At the same time, it may be seen from Table 3 that, given an approximately identical level of intensity, production costs and selling price per quintal of meat from large horned cattle differ sharply. This fact is detected upon comparison of the results for operation of kolkhozes in the first subgroup of the various groups and in the second subgroup of the groups. Thus, on kolkhozes in the second subgroup, the production costs for a quintal of meat flucturates from R 154.77 to R 171.44, while the selling price varies from R 247.33 to R 212.6. This fact no longer depends on objective conditions, but on the level to which production is organized.

On kolkhozes in the second group, grain productivity is significantly lower, and the average weight on the hoof per head of large horned cattle is less, given the same consumption of fodders per unit of weight increase. As a result, the level of profitability of meat production from large horned cattle on kolkhozes in the first group was almost 60 percent, while it was only 24 percent in the second group. And this is not coincidental. The farms in the first group are the kolkhozes "Put' Il'icha" and "Truzhenik" of Zav'yalovskiy Rayon, kolkhozes widely known in our republic and distinguished by high organization of production and fine cadres of specialists and stock breeders. And the effectiveness of agricultural production depends not only on the size of investments of means and labor, but of the level of its organization as well, i.e. on the managers and specialists of the kolkhozes and wovkhozes; it is determined by their qualifications, their work experience and the skillful application of all systems of measures for material and moral worker incentive.

In this regard, prospects for developing interfarm cooperation for fattening large horned cattle are great. There are 22 cattle-fattening enterprises operating in a cooperative basis in the republic. In 1977 labor productivity on these farms was greater by a factor of 3 than that on the average throughout the kolkhozes, and the production costs of the product was 9-10 percent lower, while the average selling price was 40-50 percent higher. Inter-farm enterprises operated profitably when production of beef on kolkhozes was unprofitable. It is not difficult to draw a conclusion from this fact.

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INCREASED WORK EFFECTIVENESS AT STATE BEEF PRODUCTION COMPLEXES URGED

Moscow ZHIVOTNOVODSTVO in Russian No 3, Mar 80 pp 13-15

[Article by V. D. Luk'yanov, chief specialist, USSR Glavzhivprom: "Improved Performance Efficiency of State Beef Production Complexes"]

[Text] Analysis of the performance of complexes over the last five years indicates that the industrial production technology incorporated in them makes it possible to conduct in an intensive manner raising and fattening of cattle.

The highest animal productivity and beef production effectiveness figures were obtained at state complexes with a capacity to raise and fatten 10,000 head of young cattle per year (see table).

In 1979 these complexes raised and fattened more than 200,000 head of young cattle, produced 64,900 tons of weight gain, and sold the state 72,000 tons of beef, 8,500 tons more than in 1978. Excellent results were achieved by the Mir complex in the Belorussian SSR, which met its socialist pledges in the area of beef production and is the leader among this country's presently-operating complexes.

Good results in competition were achieved by the following complexes: Pashskiy in Leningradskaya Oblast, Valuyskiy in Belgorodskaya Oblast, Druzhba in Vologodskaya Oblast, and Yumatovskiy in the Bashkir ASSR.

At the November (1979) CPSU Central Committee Plenum, CPSU Central Committee General Secretary Comrade L. I. Brezhnev focused major attention on problems of supplying the population with foodstuffs, especially meat. "In tackling this problem," stated L. I. Brezhnev, "we naturally placed emphasis on boosting agriculture. In the course of the last three five-year plans alone, approximately 400 million rubles has been invested in our rural areas. Considerable capital investment will also be allocated for rural areas in the 11th Five-Year Plan. At the same time we are both justified and obligated to impose greater demands on efficient utilization of resources and equipment, to ensure that strengthening of agricultural facilities has a more appreciable effect on the level of supplying our country with foodstuffs." These instructions also apply in full measure

Principal Economic Indices of Complexes With Capacity of Raising and Fattening 10,000 Head of Young Cattle, for 1979
TABLE

Complex	Number of Head as of 1 January 1980 (thousand head)	Gross Weight Gain (tons)	Average Daily Weight Gain (grams)	Sold to the State, Weight on the Hoof (tons)	Feed Consumption per Quintal Weight Gain (quintals of feed units)	Labor Expended per Quintal of Weight Gain (man-hours)	Average Weight of Stock Sold to State (kg)	Production Cost of One Quintal of Weight Gain (rubles)
Voronovo, Moskovskaya Oblast	12,7	3863	968	3836	5,6	3,9	480	109,08
Pashskiy, Leningradskaya Oblast	11,2	4009	1022	4579	5,6	2,8	426	123,38
Yumatovskiy, Bashkir ASSR	11,0	4242	1025	4706	5,6	2,5	457	108,80
Mir, Belorussian SSR	10,9	4403	1094	4588	5,4	2,4	463	99,33
Imeni 25th CPSU Congress, Ukrainian SSR	14,6	4990	947	4807	5,5	3,7	499	121,40
Dzhetygenskiy, Kazakh SSR	10,9	3180	901	4303	5,9	3,3	420	119,01
Donskoy, Stavropol'skiy Kray	11,1	3624	930	4259	6,4	3,4	427	124,14
Imeni 50th Anniversary of Komsomol, Uzbek SSR	11,8	2871	700	3207	7,1	6,7	367	109,67
Valuyskiy, Belgorodskaya Oblast	11,1	4012	1002	4643	5,8	4,2	431	113 74
Dubrovskiy, Chelyabinskaya Oblast	10,1	3757	1013	4313	6,2	3,3	446	118 34
Druzhba, Vologodskaya Oblast	11,6	4127	1027	4593	6,0	2,3	464	131, [illegible]
Pogranichnik, Moldavian SSR	10,5	2271	676	2752	9,3	8,5	346	164,57
Grigoriopol'skiy, Moldavian SSR	10,4	2407	712	2917	8,6	5,8	365	133,6[illegible]
Tolmachevskiy, Gor'kovskaya Oblast	11,9	3673	935	3818	5,7	4,1	424	12[illegible],19
Gamovskiy, Tul'skaya Oblast	9,1	2731	784	3114	7,1	8,0	347	131,78
Solnechnyy, Kuybyshevskaya Oblast	10,5	2730	932	3171	6,9	5,4	434	124,86
Mayskiy, Krasnoyarskiy Kray	9,4	2576	870	2120	6,7	6,4	390	122,11
Yegvarde, Armenian SSR	9,3	2113	687	2344	7,9	9,0	314	170,43

to the operations of certain livestock complexes which are doing a poor job of utilizing allocated investment capital. What other reason can there be for the fact that with practically equal conditions for maintaining young stock, good results have been achieved by the Mir, Pashskiy, Yumatovskiy, and Voronovo complexes, while delay in reaching designed production capacity has occurred at the following complexes: Pogranichnik and Grigoriopol'skiy in the Moldavian SSR, imeni 50th Anniversary of Komsomol in the Uzbek SSR, and Yegvarde in the Armenian SSR. This is due primarily to poor supply of coarse and succulent feeds and delay in putting irrigated acreage into production. For example, at the Complex imeni 50th Anniversary of Komsomol in the Uzbek SSR, only 2,871 tons of gross weight gain was achieved, or 75% of calculated production on the basis of standard figures for movement on-stream, in 1978 due to extremely poor supply of coarse and succulent feeds. At this complex, with requirements of 2,300 hectares of irrigated acreage, 1,365 hectares have actually been brought into operation, including 400 hectares in 1973, 160 in 1975, and 805 in 1976. More than half of this acreage was in a temporary technical operation stage and was producing poor yields due to considerable ground subsidence and features of topography. For example, each hectare of this acreage produced average yields as follows: 35 quintals of alfalfa hay, 102 quintals of silage corn, and 113 quintals of bulk green alfalfa. Nor has the situation improved. As a result of poor supply of feed produced on-farm, the complex has poor production indices on product output and sales. At the same time the Dzhetygenskiy complex in the Kazakh SSR, which is operating under comparatively identical climatic conditions, has produced better figures than the Complex imeni 50th Anniversary of Komsomol in the Uzbek SSR. The Dzhetygenskiy complex achieved 718 more tons of weight gain and sold the state 696 tons more of livestock on the hoof, with a substantially lower expenditure of labor and feed per quintal of weight gain than at the Complex imeni 50th Anniversary of Komsomol. This attests to poor organization of labor, a lack of requisite verification of observance of proper procedures of fattening stock, as well as unsatisfactory care of equipment in the process of equipment operation.

The situation is similar at the Grigoriopol'skiy complex in the Moldavian SSR, which has only 330 hectares of irrigated acreage, and at which feed preparation shop operations have not yet been fully set up.

The Yegvarde complex in the Armenian SSR is operating below its potential; every year the quantity of on-farm produced feed is inadequate, and acquisition of and hauling young stock to the complex is poorly organized. The complex produced only 2,143 tons of weight gain in 1979 (fourth year of operation), or 68 percent of the designed output capacity. Labor expenditures and feed consumption at this complex are the highest of all complexes presently operating in this country, comprising 7.9 man-hours and 9.0 quintals of feed units per quintal of output respectively.

Another reason for this situation is that the construction organizations of the USSR Ministry of Land Reclamation and Water Resources are not fully providing fulfillment of the plan target pertaining to putting reclaimed acreage into production at the complexes.

The weak link in organization of meat production is acquisition of young stock. On the average 51.6 percent of the total number of calves born each year on this country's kolkhozes and sovkhozes are born in a four-month period (February through May), while only 16.2 percent are born from July through October, while the seasonal nature of calving is even more strongly marked on the farms in certain republics. In connection with this, farms with a total of not less than 50-60 thousand breeding cows are assigned to each complex, but even with this arrangement almost all complexes experience difficulties with stock in the summer period.

USSR Glavzhivprom has developed a new method of variable-uniform supplying of young stock to complexes taking account of the seasonal nature of calving (ZHIVOTNOVODSTVO, No 4, 1976). This principle is applied at the experimental complex of the Sovkhoz imeni Tel'man in the Tadzhik SSR, with a capacity of raising and fattening 10,000 head of young cattle per year. It is based on the principle of periodically varying duration of livestock confinement, which makes it possible to take from 400 to 1600 calves per month for the first period of raising, that is, the bulk of bull calves born on the supplier farms.

In view of the fact that month-by-month distribution of calvings is similar in the majority of republics and oblasts, with a differing degree of markedness of seasonal fluctuations in calvings, the proposed method is acceptable for preparing cyclograms of the operation of such complexes in various zones in the USSR.

Bringing in older and heavier calves, as well as unlimited feeding of young stock with feed mixes in the first period of growth lead to a 30-40 percent overconsumption of short-supply starter feed mixes (KR-1) in comparison with calculated standard amounts. At the same time unlimited feeding of feed mixes in the first period of growth, when cicatricial digestion is forming in the animals, has a negative effect on development of rumen volume due to a deficiency of coarse feeds, and therefore such young stock is subsequently unable, during the finishing period, of consuming a sufficient volume of feed mixes, which evidently is the reason for decrease in daily average weight gain two to three months prior to reaching finished condition. Taking this into account, as early as 1975 the Mir complex adopted standard feed mix rations for calves during the first growth period. Feed consumption declined by 23-36 percent in comparision with other complexes, and feed savings per animal totaled 65-133 kg. At the same time haylage consumption in the second period of growth increased significantly, while the percentage share of concentrates in the overall ration structure declined by 3-9 percent and approached technical standards. Redistribution of weight gain by periods took place on the complex due to norm-specified feeding of concentrated feed mixes: in the first period weight gains declined, but they increased substantially in the second. For 1978, for example, the average daily weight gain was 824 grams in the first period, 1,201 grams in the second period, and 1,090 grams on the average for the Mir complex, which surpasses the performance of all other complexes operating in the Soviet Union, and labor expenditures and feed consumption comprised 2.4 man-hours and 5.4 quintals of feed units respectively per quintal of output.

These figures attest to the necessity of adopting norm-specified feeding of feed mix concentrates during the first growth period, while maintaining

Scientific Research Institute of Livestock Breeding) that green feeds be given during the last two months of finishing, in order to prevent a decline in net slaughter weight and diminished quality of the meat produced. However, in order to achieve guaranteed uninterrupted feeding of young stock, it is necessary to lay away a full year's stock of haylage for the complex, with part of this supply utilized as carryover emergency stocks.

Positive results were obtained at the Mir complex in utilizing molasses in feeding young stock in the second period. At this complex skilled local personnel designed and set up simple equipment to add molasses directly to the conveyer feeding bulk haylage, which made it possible to standardize the sugar-protein ratio in the livestock ration and substantially to increase the average daily weight gain during the finishing period.

The Mir complex also was a pioneer in reducing labor outlays. The zveno [production team] system of organization of labor was employed to achieve this end. Three production teams (of three persons each) were established for taking care of the needs of young stock, with each operator workloaded with 350 head in place of the 180 head according to the conventional arrangement, and four production teams for final raising and fattening stock, with each operator work-loaded with 1,040 head in place of the 720 specified by the original scheme. All substitute operators were eliminated with this work organization, which helped increase the responsibility of servicing personnel and improve care of the stock, and also help increase worker wages. The production team organization of labor has also been adopted at the Yumatovskiy complex in the Bashkir ASSR, the Druzhba complex in Vologodskaya Oblast, and the Donskoy complex in Stavropol'skiy Kray. Exchange of production and work experience among complexes has promoted implementation of a number of suggestions which are improving operating processes. For example, heating of water for first-period calves has been adopted almost everywhere, which has reduced pulmonary ailments; watering troughs in the second period have been moved to the exterior of the confinement area, which has substantially reduced breakage and water loss, has reduced repair outlays and has improved the state of confinement unit sanitation; the rear wall of the self-feeder has been built up an additional 15 centimeters, which has reduced concentrated feed mix losses during the first period; a vibrating screen-agitator has been designed and installed in the second-period feed mix bin, which has eliminated passage of large feed particles and has reduced by 90 percent cable-plate conveyer separation; aerosol disinfection of confinement areas has been employed, cutting disinfection time from 5-6 hours to 20 minutes, plus a number of other refinements which have helped improve care of young stock at the complexes.

Implementation of measures to achieve intensification of livestock raising, employment of advanced processes and new forms of production organization, adoption of scientific advances and advanced know-how, concern for innovative initiative on the part of complex specialists and managers, and unlimited availability of coarse feeds to the calves. For the second year now concentrated feeds have been norm-dispensed in the first growing period at the Voronovo complex, which has also resulted in a substantial increase in average daily weight gain.

This complex obtained in 1978 an average daily weight gain of 990 grams in the first period and 1,063 grams in the second.

In spite of stability in obtaining average daily weight gain for all currently-operating complexes, the average finished weight per animal has increased. This attests to a decrease in the number of animals culled out prior to completion of the finishing process. The complexes remove so-called "veterinary cull" animals from the herd and deliver them to the meat-packing combine in differing numbers, with equal conditions of stock care. The Yumatovskiy complex in the Bashkir ASSR delivers 3.5 percent of the total number of head sold to the state as bull calves up to 350 kg in weight, while the Pashskiy, Voronovo, and Mir complexes have figures of 6.5-7.3 percent. Consequently, in establishing appropriate conditions for stock care and feeding, it is possible to reduce to a minimum premature removal of animals from the fattening operation. An analysis indicated that animals are delivered to the meat-packing combine early for the most part due to leg injuries, pulmonary and other diseases, caused by poor quality of gapped floors and enclosure structures, disruption of proper feeding conditions and failure to maintain an optimal microclimate, inhomogeneity of production groups, as well as excessive packing of animals in confinement spaces.

The dimensions and shapes of gapped floors and standard per-animal floor space have been revised, with these figures contained in the new technical design standards.

At many complexes production groups are formed at 400 head and more (instead of 360 as specifications call for), by closely packing animals in group confinement units (20-21 head in place of 18). This makes it possible to obtain an additional 1,000-1,200 bull calves each year and additional weight gain.

Practical experience has shown, however, that when more than 380 head are run per section, there is a sharp increase in animal injury, especially in the second period. The optimal floor space in the second period is considered to be 2.0-2.1 m^2 per head, while when a group numbers 400 head, each calf has only 1.7 m^2, or 20 percent below standard. This worsens care conditions and increases animal injuries.

The experience of currently-operating complexes has indicated that in the summer period it is advisable to utilize in feeding young stock bulk green fodder mixed with haylage and concentrated feed mixes. Utilization of green fodders makes it possible not only to replace up to 50-60 percent of haylage in the daily ration but also to achieve savings in concentrated feed. At the same time it is not recommended (All-Union
an increasing scope of socialist competition among stockmen to achieve the best labor productivity performance figures are the main factors which influence further increase in livestock production.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

CROP TENDING MEASURES IN ROSTOVSKAYA OBLAST DISCUSSED

Moscow IZVESTIYA in Russian 6 Jun 80 p 1

[Article by G. Gubanov (Rostov-na-Donu): "Summer in the Don River Region"]

[Text] With each passing day the grain fields in the Don River region are becoming more rich looking in appearance. Strong shoots are appearing on the winter crops and fine ears are forming. The oblast's machine operators have just completed sowing their rice and applying the first top dressing to the winter crops.

"In tending the winter crops" stated the chief agronomist for the Gigant Sovkhoz N. Trofimenko, "during a given stage in the campaign to obtain high yields of grain and, even more important, to obtain strong and valuable wheats, importance is attached to having an accurate knowledge of those fields which in all probability will produce excellent grain. A laboratory determines the presence of nutrients in the leaf portion of a plant and if the content is less than the potential norm, then we do not apply fertilizer to the field. In this manner, we conserve in the use of resources. On the other hand, we apply top dressings to those crops where a good foundation has been established for strong grain."

It bears mentioning that it is to the credit of the Don region farmers that the method of laboratory analysis and forecasting of strong wheat production is already being employed extensively on almost all farms. And this is quite understandable. Indeed the principal goal -- that of carrying out the obligations with regard to the production of grain -- requires a constant searching for reserves and maximum output of energy and knowledge by both the scientists and machine operators.

For example, let us take our rye plantings, which occupy an area in excess of 1 million hectares throughout the oblast. In the opinion of Doctor of Agricultural Sciences A. Sokol at the Don Plant Breeding Center, the situation on these fields is more complicated. If at the present time we were able to provide the barley with just 1 quintal of nitrogen fertilizer per hectare then, based upon the development of the plantings, each hectare would furnish up to 3 additional quintals of grain. Requisitions were long ago submitted for 150,000 tons of such fertilizer and the grain growers are wasting valuable time in anticipation of it being received. Meanwhile, nothing is available for easing the hunger for nitrogen out on the fields.

Many problems are also arising during the early part of this summer out on the corn and vegetable plantations and also on the sunflower, sorghum and beet fields.

Pre-seedling "blind" harrowing, an agricultural method that has undergone testing over a period of many years, has already been carried out on the entire area of row crops. Fine seedlings have appeared on four out of every five hectares and more than two thirds of the fields have been harrowed.

The kolkhozes and sovkhozes in the Don region are following a course aimed at sharply expanding the cultivation of corn using an industrial technology and they have increased their corn growing areas by a factor of 15 compared to last year. Nevertheless, we still have not eliminated entirely the use of manual weed control operations on the plantations. On large worker settlements and in villages, based upon initiative displayed by the local soviets of worker's deputies, mass meetings of the population were held, where unanimous decisions were handed down calling for the thorough tending of each hundredth of a hectare and each row of crops. Many residents have displayed initiative by volunteering to tend no less than 1 hectare of crops.

Thousands of city workers in the Don region are going out to the kolkhozes and sovkhozes at the present time in order to assist the farmers in clearing the fields and plantations of weeds and raising the density of the plant stands to the norm figure.

"Earlier we assigned the crops to farmyards, enterprises and organizations" stated the 1st secretary of the Veshenskiy Rayon Party Committee N. Bulavin, "But here is what happened: the helpers came to the farms and at best they were commanded by an agronomist; he would point out the field and they would work. On another occasion they were sent out to eliminate weeds among the vegetable crops and still on a third occasion -- no work was provided for them. It was clearly a case of absence of personal responsibility."

This year we reorganized the labor organization for the city-dwellers. Agreements calling for collaboration between the enterprises, organizations and farms have now been concluded. These agreements indicate the particular areas to be worked and the amount of crops to be cultivated by the helpers, for example fodder beets or another crop, and the farms for their part are obligated to issue appropriate payments. Thus, as the saying goes, each collective has its own field, sees the results of its labor and is interested in achieving high indicators.

It is hoped that the experience of the workers in Veshenskiy Rayon will be actively supported in other rayons, thus precluding the need for a mass exodus of people from the cities.

"Assistance should be furnished to those who are performing in a diligent manner" state the patrons. And truly, today the principal burden with regard to tending the crops is being borne by the kolkhoz and sovkhoz machine operators. Indeed, there was ample reason for 350 teams promising to obtain 22-26 and 560 teams -- 16-20 quintals of sunflower seed from each hectare. Even higher goals are planned by the corn growers. One hundred and sixty teams resolved to obtain 60-100 or more quintals under irrigation conditions and 200 collectives vowed to obtain 50 quintals of grain per hectare under non-irrigation conditions.

One million tons of grain will be obtained from the corn, rice, millet and sorghum crops. The millet crop is deserving of special mention. In view of the weather conditions, the plantings of this crop were increased to 130,000 hectares -- 9,000 more than the figure called for in the plan. This represents one source for the production of additional grain. It should be noted that this year the farms in the Don region not only intend to fulfill their tense grain production plans, but in addition they plan on maintaining the conditions required for the harvesting of each crop. "We are aware" state the farmers, "that the country requires not just grain, but grain of high quality and in the required assortment: to include wheat, peas, soybeans and buckwheat."

At the Kolkhoz imeni Grechko in Kuybyshevskiy Rayon, the initial units move out onto the plowed land at 0400 hours in the morning. At 1400 hours in the afternoon the second shift appears and continues the work until the evening dew falls. In Zernogradskiy Rayon the machine operators also go out onto the plantations at an early hour, but here they work in the same manner as when harvesting the grain crops: 2-3 hours behind a steering wheel before they are replaced and allowed to rest. This method ensures both high labor productivity and high quality work.

Many examples could be cited highlighting the skilful organization of work in Aksayskiy, Tarasovskiy, Sal'skiy, Zernogradskiy, Neklinovskiy, Matveyevo-Kurganskiy, Bagayevskiy and other rayons.

At the present time, with a high value being placed on each moment of time and with all effort being subordinated to one goal -- tending the crops in the proper manner -- slow and sluggish operations are being tolerated in various areas. In Kasharskiy, Morozovskiy, Oblivskiy, Chertkovskiy and Belokalitvinskiy rayons the cultivators are by no means being operated throughout the entire daylight period, nor has efficient technical servicing been organized for them. As a result, following breakdowns they at times remain idle for prolonged periods of time. It is in this area that very strict requirements must be imposed upon the engineering services of the farms. Their primary responsibility is to ensure continuous and efficient operation of the equipment throughout the entire daylight period and to achieve a situation wherein a master trouble-shooter and mobile workshops are available out on the fields on which the machine operators are working On the eve of the working day, each machine operator must obtain a clear understanding of the task, the technical principles involved in working the fields and the output norms. The brigade and department leaders and the farm specialists must assist them in this regard.

The ears of wheat are forming out on the Don region expanses and the corn and sunflowers are stretching out to catch the light. And each day these boundless fields await and require the attention of concerned hands, so that the farmers will be amply awarded for their labor during the hot harvest season.

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PEST, DISEASE FORECAST FOR BELORUSSIAN SSR

Minsk SEL'SKAYA GAZETA in Russian 1 Jun 80 p 2

[Article by P. Yas'kova, head of Belorussian Republic Laboratory for Forecasts and Diagnostics for Plant Pests and Diseases and N. Kharchenko, head of Laboratory for Forecasts of BelNIIZR: "Forecast of Development of Agricultural Crop Pests and Diseases for First Decade of June This Year"]

[Text] Following the winter period, the number of agricultural crop pests in the republic continues to be considerable. The cold and delayed spring only served to restrain temporarily their development and harmful activity. Their activity has increased with the onset of warm weather.

Flax flea-beetles are causing damage to the flax plantings in all areas. Their number exceeds 30 per square meter and thus it is economically advisable to commence chemical treatment against them. In view of the fact that they cause more damage during hot and dry weather, the chemical treatment of the flax seedlings should commence immediately.

Flea-beetles and opaque carrion beetles have appeared out on the beet plantings. Special attention should be given to organizing a campaign against the opaque carrion beetles in Ivatsevichskiy, Pinskiy, Luninetskiy, Grodnenskiy, Gomel'skiy, Kalinkovichskiy, Lyubanskiy and Klimovichskiy rayons, where there is a greater danger of plant damage occurring in plantings located in the vicinity of areas in which this pest was concentrated last year. Chemical treatment must be carried out when the number of pests per square meter reaches two for the opaque carrion beetle and 10 for the garden fleas.

On farms in Gomel'skaya Oblast, where core rot is observed each year in the beet root crops, caused by a boron deficiency in the soil, a top dressing of boron should be applied to the plant seedlings during the phase of two true leaves.

An analysis of the frit-fly populations in all areas reveals that their intensive flight can be expected in early July. At this time the mass plantings of spring grain crops will be in a less vulnerable phase of development -- tillering. The flies may cause considerable damage to late plantings of spring grain crops located in the vicinity of August-sown winter crops. If the number of flies in barley is more than 25 and in oats more than 30 per 100 sweeps of an insect net, chemical weed control work in such plantings should ideally be carried out with insecticides added.

Mustard family fleas cause damage to cabbage out on the fields and in nurseries and to turnips, rape and other crops of the mustard family. The number of these pests and the harm caused by them will be high during warm and dry weather. Chemical treatment should be carried out when there are more than three of these pests per plant.

Sucking and leaf-chewing pests continue to cause damage to orchards in all areas, with the young leaves of apple and pear trees becoming infested with scab and other leaf blights. The phase during which the buds separate and turn pink in color is considered to be the best period in which to combat a complex of pests and diseases. In addition to chemical preparations and when the temperature exceeds 13 degrees, use can be made of the biopreparations dendrobacillin, BIP or bitoxybacillin.

In order to prevent the appearance of white leaf blight and macrosporiosis on tomato plants in the field, the seedlings should be treated with fungicides 5-6 days prior to planting.

Each year, considerable damage is caused to cucumber sprouts by Chortophila florilega. In order to prevent the germinating seed and seedlings from perishing, the farmyard manure which attracts the flies should be thoroughly plowed under. The seed must be dusted using phentiuram -- 3 grams, or TMTD [tetramethylthiuram disulfide] -- 4 grams per kilogram of seed.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

MEASURES FOR COMBATING PESTS, DISEASES OF AGRICULTURAL CROPS

Kishinev SOVETSKAYA MOLDAVIYA in Russian 15 Apr 80 p 3

[Article by Main Administration for the Protection of Plants of Moldsel'khozkhimiya: "How To Destroy Pests"]

[Text] This year has turned out to be an extremely favorable one for the principal pests and diseases of agricultural crops. The prolonged autumn and moderate winter promoted good wintering of the pests in the soil. The increase in temperatures during the month of April brought about their rapid rise to the surface. This is making it possible, using one effective method, to destroy a considerable number of the pests without having to carry out repeated treatments.

The appearance of a majority of the harmful insects will coincide with the seedling stage for cultivated crops, that is, with the most vulnerable phase of their development. Under such conditions, even the slightest delay in the carrying out of chemical treatment work could result in mass damage and raise the need for resowing a particular crop. Thus the fields must be inspected on a daily basis and measures must be undertaken to protect the plants. The possibility is not ruled out that several types of insects may appear simultaneously in the plantings of winter wheat, barley, sunflowers, sugar beets, corn and other crops. This could result in a great amount of damage to the crops.

According to the forecast, the winter crop plantings are threatened seriously this year by the grain ground beetle, grass flies and the southern grey weevil. The timely treatment of fields using the hexachloran and metaphos preparations will produce good results in combating these pests. In combating the southern grey weevil, emphasis should be placed on treating border strips, particularly those areas which border on corn and sunflower plantings.

With the onset of daily plus temperatures that are no lower than 18 degrees, chemical weed control work using 2.4-D (amine) salt should be carried out prior to the shooting stage for the winter crops, on thinned out tracts that are not subject to resowing. Seed plantings of winter wheat, when threatened by strong powdery mildew and septoria spot development, should be sprayed with fundazol or sulphur preparations and against septoria spot -- sineb.

For protecting the seed of row crops against damage caused by wireworms, toxication of the seed should be carried out immediately using a gamma-isomer of hexachloran or heptachlor with phosphamide. In those areas where the seed is not to be treated, granulated preparations should be applied to the soil simultaneously with the sowing work.

The bulk of the beet weevils -- up to 95 percent -- is found on old beet tracts. In order to prevent them from shifting over to new sugar beet plantings, the border strips of the old beet tracts should be chemically treated when the pests first make their appearance. Upon the appearance of leaf beetles, flea beetles and weevils on the seedlings, the beets should be treated using such preparations as hexachloran, phtalophos, bazudin or polychlorcamphene.

It is recommended that chlorophos or metaphos be used for protecting pulse crop seedlings against sitona weevils. First of all, the edges of fields should be treated to a depth of 30-40 meters from perennial grass tracts and forest belts. These treatments are also effective against other types of weevils.

In order to protect sunflowers from damage caused by the southern grey and beet weevils, the plantings should be treated using hexachloran or metaphos preparations.

Taking into account the possibility that the pests may appear simultaneously and in mass numbers over large areas and also the fact that the machine-tractor pool may be operating under a severe workload during the period of early spring operations, extensive use should be made of aviation. Success can be achieved in protecting crops against pests and diseases only upon the condition that complete and operational use is made of all available resources.

7026
CSO: 1824

FIELD WORK SITUATION IN NONCHERNOZEM ZONE

Moscow SOVETSKAYA ROSSIYA in Russian 24 May 80 p 1

[Article by Ye. Kardash, chief of the Main Administration of the Central Region, RSFSR Ministry of Agriculture; G. Gulyayev, director of the Scientific Research Institute of Agriculture for the Central Regions of the Nonchernozem Zone: "Value Every Hour"]

[Text] This year field work in the Nonchernozem Zone is being done under difficult conditions imposed by a late and cold spring. Because of low temperatures and water-logged soils, early spring crops have still not come up over large areas and in some oblasts--particularly, Ivanovskaya, Kostromskaya and Yaroslavskaya--sowing has not even been completed. Normal ripening of grain in this zone requires positive temperatures equal to 1,600 degrees for barley and 1,800 degrees for oats. The plan for sowing of spring crops must be completed on all farms within the next few days. Every hour is to be valued.

With the late sowing it is essential that diligent watch be kept over the quality of all work; short-cuts cannot be allowed. Since soils are highly compacted, sowing must be done only in well-cultivated soil with no delay between cultivation and sowing. To accelerate seedling emergence, the seed must be sown at a shallower depth than usual. Late sowings have less energy for reaching the tillering stage. Therefore, the sowing rate should be increased by 10-15 percent. This will substantially increase the yield.

In the regions north of Moscow conditions for care and development of winter crops were less favorable; they are broken down and grown up in weeds. In order to prevent growth of weeds and increase yields, when warm days arrive these fields must be treated with herbicides (amine salt 2.4-D at a rate of .8 kilogram of active agent per hectare).

The spring grain crops may also be grown up in weeds due to their late emergence. These fields should first be treated with amine salt 2.4-D. The use of harrows to combat weeds in heavy loam soils is not desirable.

Weather is now favorable for the formation of winter crops and perennial grasses. The condition of sowings which have grown sparse through the winter is now improving. In order not to allow these crops to become beaten down, they should be treated with retardants: winter rye with kampozan--4 liters per hectare in the middle of the stem-extension stage; winter wheat with TUR--6-8 liters per hectare at the beginning of the same stage. The time for this treatment is practically upon us.

This year we can expect a long interval between maturation times for winter and spring grain crops. This will allow better organization of the harvests.

Below-normal temperatures and an abundance of moisture in May are favorable for tillering and putting on of green growth by perennial grasses. Under these conditions, in order to bring the fodder yield up to 350-400 quintals per hectare and increase its protein content to 10-15 percent, it is advisable to apply supplementary nitrogen fertilizer.

It is not too late to recommend that broken down first-year grass stands having fewer than 50 plants per square meter be over-sown with any of the perennial grasses mixed with barley or oats.

Old broken-down grass stands that are plowed this year should be cut early and resown in annual grasses to increase the yield of green chop.

As we complete sowing and undertake the care of crops, it is necessary to take all measures to improve the condition of fields: close up gaps; level the edges of fields; systematically destroy weeds in the sowings, in the passage strips and along roadways.

12184
CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

UZBEKISTAN GRAIN HARVEST REPORT--The harvesting of grain crops is in full swing in Uzbekistan. It is already nearing completion in the southern part of the republic and many farms in Surkhandar'inskaya Oblast have fulfilled or over-fulfilled their state plans. Angorskiy, Termezskiy and Dzharkurganskiy rayons were the first here to complete their grain harvest work. The harvesting of grain crops is also in full swing in Kashkadar'inskaya, Andizhanskaya, Ferganskaya and Tashkentskaya oblasts. The republic's grain growers are devoting a great amount of effort towards ensuring that the grain of the new harvest is gathered up quickly and without losses. [Text] [Moscow IZVESTIYA in Russian 7 Jun 80 p 1] 7026

TURKMEN GRAIN HARVEST OPERATIONS--Turkmen SSR--The harvesting of grain crops has commenced in the republic. The machine operators in Ashkhabadskaya Oblast were the first to begin this work. The workers at the Kolkhoz imeni Lenin in Geok-Tepinskiy Rayon are harvesting their barley crop in an efficient manner, while making extensive use of the method employed by the Ipatovo farmers. The initial tons of barley grain have been received at the Ashkhabad Grain Products Combine. [Text] [Moscow IZVESTIYA in Russian 5 Jun 80 p 1] 7026

GRAIN SOWING WORK COMPLETED--The republic's farmers have completed sowing their grain and pulse crops several days earlier than was the case last year. These crops have been planted on an area in excess of 23 million hectares. Despite the fact that a considerable portion of the land was not prepared in the autumn owing to unfavorable weather, the sowing work was carried out during the best periods and in a high quality manner. This was the result of the work being organized based upon the large group method: more than 3,000 mechanized complexes were in operation. This made it possible on some days to sow 1.5-1.7 million hectares -- an unprecedented indicator. The principal food crop -- wheat -- was sown on 15.7 million hectares. Only seed for strong and valuable varieties of the highest condition was planted in the soil. Phosphorous fertilizers were applied to the rows over large areas. Only anti-erosion sowing machines were used. In all areas the sowing work was carried out more rapidly than ever before. The leading machine operators fulfilled one and a half to two norms during just one shift, sowing 110-150 hectares with their Kirovets machines. As a rule, the equipment was employed in two shifts. This was achieved by virtue of having trained a large number of machine operators during the winter period. Many farms completed their sowing work in just 5-7 working days. The republic's farmers introduced substantial changes into the disposition of the sown areas. The plan for the sowing of wheat was overfulfilled and, owing to the introduction into operations of new irrigated lands, the sugar beet, rice and cotton plantations were expanded. The buckwheat, peas and soybean sowings were increased. The sowing work was carried out under the slogan: "A Badge of Quality for Each Field" and "For the Last Year of the Five-Year Plan -- Full-Weight Ears of the Virgin Land!" Healthy seedlings have appeared out on the fields. The machine operators have commenced tending their crops. [Text] [Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 31 May 80 p 1] 7026

FIELD WORK IN TURKMEN SSR--Ashkhabad, 13 May--The farmers in the Turkmen SSR sowed their spring crops during the best periods: cotton, corn, alfalfa and early vegetables. Healthy seedlings have appeared in all areas and at the present time all effort on the farms is being directed towards creating optimum conditions for the optimum development of the plants. The workers in Chardzhouskaya, Maryyskaya and Ashkhabadskaya oblasts are loosening the inter-row spacings and thinning out the plants on the cotton and corn plantations and they are also harrowing and repairing the alfalfa tracts. The first watering has been carried out on 100,000 hectares of spring crops. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 14 May 80 p 3] 7026

MASS HARVESTING OF WINTER GRAINS--Ashkhabad, 6 June--The grain growers of the Prikopetdagskaya Valley and the Tedzhen Oasis -- the principal grain areas of the Turkmen SSR -- have commenced their mass harvesting of winter grain crops. Eighty two harvesting-transport complexes, numbering approximately 400 combines, hundreds of tractor trains, motor vehicles and other transport equipment, have been created. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 7 Jun 80 p 1] 7026

TSELINOGRADSKAYA OBLAST GRAIN PLAN--Tselinograd--Yesterday the farmers in Tselinogradskaya Oblast completed their sowing of grain crops considerably earlier than usual. Mineral fertilizers were applied to almost 1 million hectares of fields simultaneously with the seed. This year the virgin land grain growers plan on selling 2.5 million tons of grain to the state. [Text] [Moscow TRUD in Russian 30 May 80 p 1] 7026

GRAIN HARVEST IN TURKMEN SSR --Ashkhabad--Motor vehicle trains are transporting the grain of the new harvest over the roads in the southern part of Turkmenistan. Yesterday the first 1,000 tons of barley were delivered to procurement points in Ashkhabadskaya and Maryyskaya oblasts. Those kolkhozes in Ashkhabadskiy and Gyaurskiy rayons which cultivate grain on virgin land in the zone of the Kara-Kum Canal obtained 30-35 quintals of grain from each hectare. This year, those farms in the republic which specialize in cotton and vegetable production set aside 86,000 hectares for grain crops. The plans call for no less than 20 quintals of grain to be obtained from each hectare. [Text] [Moscow TRUD in Russian 6 Jun 80 p 1] 7026

GRAIN PRODUCTION INCREASE PLANNED--Termez--Dozens of tons of wheat grown on irrigated land have been delivered to the grain receiving enterprises by farms in Shurchinskiy and Gagarinskiy rayons of Surkhandar'inskaya Oblast. This year the farmers plan to increase their grain production considerably. All of the procurement enterprises have been made ready for accepting and storing it. This year, for the very first time, the grain will be shipped to a milling combine that has been erected in the rayon center of Shurchi. Its first phase, which has already been placed in operation, includes an elevator for 114,000 tons and a mill for the processing of 600 tons of grain daily. [Text] [Moscow TRUD in Russian 6 Jun 80 p 1] 7026

KAZAKHSTAN FIELD WORK--Alma-Ata, 26 May--The kolkhozes and sovkhozes of Kazakhstan completed their sowing of the principal food crop -- spring wheat -- during the best periods. It was sown on an area in excess of 15 million hectares. The successful carrying out of the sowing work was promoted by fine preparation of the equipment and seed, well thought out organization of all field work and by extensive use of the experience accumulated by the Ipatovo farmers. The daily increase in the area sown in grain crops has reached 1.4 million hectares. In particular, the work is being carried out at a high tempo in the virgin land oblasts. During a period of 24 hours, the machine operators in Kustanayskaya Oblast sowed 322,000 hectares, Tselinogradskaya Oblast -- 220,000 and in Turgayskaya Oblast -- 207,000 hectares. The republic's farms are continuing to sow forage and pulse crops. The center of the work has shifted to haying lands where the mass procurement of coarse feed for animal husbandry has unfolded. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 27 May 80 p 1] 7026

DIFFICULT SOWING CONDITIONS--Permskaya Oblast--The grain growers in the western Urals region are encountering difficult conditions in carrying out their sowing work this year. First of all, the delayed spring caused a postponement in the work schedules and, secondly, roughly one third of the spring fields -- 420,000 hectares -- had to be sown following spring plowing. But even under these conditions, many collectives succeeded in making up for the lost time. The leading rayons include Chaykovskiy, Bardymskiy and Ordinskiy, where the sowing machines are already departing the fields. For the oblast as a whole, the daily increase in the sown areas has reached 75,000-80,000 hectares. For the most part, this was made possible owing to the extensive organization of field work based upon the Ipatovo method. Five hundred and sixty mechanized complexes are carrying out the soil preparation and sowing work on the farms. True, they are not operating in an efficient and productive manner in all areas; in some areas they have been unable to ensure around-the-clock operation of the equipment. This fact alone, for example, explains why such rayons as Il'inskiy, Solikamskiy, Karagayskiy and Sivinskiy have fallen behind in carrying out this work. Lack of organization and sluggish activities out on the fields are especially intolerable at the present time, since the time is at hand for the mass planting of potatoes and vegetables and for the sowing of late forage crops. [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 27 May 80 p 1] 7026

SPRING SOWING OPERATIONS COMPLETED--Orenburg, 27 May--The grain growers in Orenburgskaya Oblast -- the largest grain area in Russia -- have completed sowing their spring crops, with the work having been carried out during the best periods and in a high quality manner. Good quality seed has been planted in the soil on an area of 4.4 million hectares. Healthy seedlings have made their appearance in the southern rayons of the oblast. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 May 80 p 1] 7026

ANTI-LODGING KAMPOZAN PREPARATION--Grodno, 26 May--This year the farmers at the Kolkhoz imeni Lenin in Smorganskiy Rayon vowed to obtain no less than 30 quintals of grain from each hectare of rice planting. In order to obtain such a yield, the crop was planted in well cultivated and fertilized soil. The crop endured the winter in fine condition. In order to avoid lodging, the plans called for the plantings to be treated with a special preparation. Kampozan was employed for the very first time for this purpose. The machine operators commenced this work just as soon as the plants entered the shooting stage. They applied the preparation to the plantings on a warm sunny day. This year, at kolkhozes and sovkhozes throughout the rayon, kampozan will be employed to combat lodging in rice plantings on 850 hectares. This work is being carried out using the resources of both the farms and the collective of the rayon office for agricultural chemistry. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 27 May 80 p 1] 7026

PROGRESSIVE CULTIVATION TECHNOLOGY--Orel--A progressive technology for the cultivation of buckwheat is being introduced into operations on farms in Orlovskaya Oblast. The mass sowing of this crop is being carried out using the wide-swath method. This will make it possible to carry out several inter-row cultivations of the plantings with simultaneous applications of fertilizer. [Text] [Moscow TRUD in Russian 30 May 80 p 1] 7026

FOR HIGH FORAGE CROP YIELDS--Khar'kov--Irrigated lands are included in the crop rotation plan for farms located on the flood-plain of the Velikiy Burluk River. The irrigation system, created here on an area of 3,000 hectares, serves to guarantee that high forage crop yields will be obtained. [Text] [Moscow TRUD in Russian 30 May 80 p 1] 7026

MECHANIZED DETACHMENTS FORMED--Kiev--This year the Ukrainian grain will be harvested only by complex mechanized detachments. The formation of these detachments was completed yesterday on farms throughout the republic. Each of these subunits, created based upon the Ipatovo method, has crews for double-shift operations. This will make it possible to maintain a high work tempo for the cutting and thrashing of the grain crops, which occupy an area of more than 17 million hectares at the kolkhozes and sovkhozes. [Text] [Moscow TRUD in Russian 6 Jun 80 p 1] 7026

CSO: 1824

POST HARVEST CROP PROCESSING

IMPROVEMENT CALLED FOR IN TRANSPORT OF FEED YEASTS

Kiev SIL'SKIY VISTI in Ukrainian 6 Jun 80 p 2

[Article by M. Kolyada, special correspondent: "The Carload of Feed Yeasts: What is Impeding Introduction of the Package-Free System of Transporting Products"]

[Text] At the October distillery, which is in the city of Karlovka, 3,500-4,000 tons of feed yeast on the average are manufactured annually, depending on the yield of sugar beets. The yeast goes to the production of mixed feed for cattle and poultry. Previously 70-80 percent of it was delivered to the Poltava mixed feed plant annually, since it is some 60 kilometers from Karlovka to the regional center.

As a rule this important ingredient of mixed feeds was transported by railroad, but this often created a number of problems: now there was a shortage of packaging materials, now the cars were not delivered on time. The opposite also happened: the cars came in, but there was no one to load them. A brigade of loaders had to be hastily organized in order for the cars not to stand idle. And that cannot always be quickly accomplished.

This is when the local rationalizers, together with the director of the plant D. I. Shevchenko, and head engineer V. Ya. Kyrychenko started thinking about how to eliminate "bottlenecks" at the plants.

Supporting the initiative of the workers of Zaporozhskaya Oblast--"Manual Labor on the Shoulders of Machines"--the skilled craftsmen of the plant introduced the package-free system of transporting and storing feed yeasts. In order to do so they set up a mechanized loading line by themselves. But in order for it to operate, the distillery needed at least two special ZSK-10 vehicles.

Unfortunately, the administrators and specialists of the plant haunted the threshold of the Kharkov Production Association of the Spirits, Liqueurs and Vodka Industry and the Ministry of the Food Industry of the republic for more than a month requesting these vehicles. These were finally received in February of this year. Now 8 persons who previously packaged the yeast, 12 who loaded it into the cars and 5 who unloaded it at the mixed feed enterprises have been freed at the plant. Moreover, the requirement for cars and paper packaging no longer arises. According to the experts' estimates, work productivity on transportation of feed yeasts increased by 21.4 percent, and the annual economic effect from the innovation is as much as R 26,000.

The UkSSR Ministry of the Food Industry praised the Karlovka workers' experience and recommended it for introduction at other plants.

It would seem that a good initiative has been given wide scope and that we can finish with that. But it is turning out to be too early to do so, since a new "yeast center" has already been set up by other planning departments. The main administration of the mixed feed industry of the UkSSR Ministry of Procurement ordered only 200 tons of feed yeast from the October Mixed Feed Plant, although there is a possibility of such shipments being increased four-fold.

The question arises: where will this ingredient be obtained for here, and where will the Karlovka feed yeast be shipped? As has become known, they plan to deliver hydrolytic feed yeasts to Poltava from Mariyskaya ASSR and Irkutskaya, Volgogradskaya and Kostromskaya Oblasts and alcoholic feed yeasts from Karlovka to Donetskaya, Voroshilovgradskaya and other oblasts. The cost of transporting a ton of such yeast from Karlovka to Poltava is R 39, but from, say, the city of Svetloyarskiy in Volgogradskaya Oblast it is R 142, and from the city of Manturovo in Kostomskaya Oblast, R 217.

The November (1979) CPSU Central Committee Plenum set workers in railroad transportation the task of finding additional reserves for increasing transportation and improving service to the national economy. And the railroad workers are searching for them. But what is happening at present? First, this failure to think things out in planning has eliminated the possibility of using the package-free method of transporting feed yeast at the October distillery, i.e., is forcing us to take a step backwards. Second, transportation costs for delivery of these products alone are increasing more than five-fold. For the hydrolytic feed yeast which is shipped miles and miles away (and it is significantly more expensive than alcoholic yeast), more than 800 tons of which was allocated to the Poltava Mixed Feed Plant for the second quarter of this year, costs the farms more than R 100,000 more than that manufactured and used on the spot. This has a negative effect on the production cost of the products of animal husbandry and on the economics of the farms. Are cross-hauls of feed yeast really justified?

"Most of the listed suppliers of feed yeast other than the October distillery often miss the deadlines for their deliveries, and this sometimes makes the plant hectic," the director of the Poltava Mixed Feed Plant, I. G. Tkachenko explained.

V. V. Lozyts'ka, acting director of the manufacturing and technical laboratory of the plant adds, "Yeast delivered from such a distance becomes compressed, and often funds have to be spent on breaking them up."

But what does the republic's ministry of procurement think about this?

"The question raised merits attention," said Assistant Director of the UkSSR Main Administration of the Mixed Feed Industry A. Ya. Psheslins'kiy. "I don't guarantee that everything here is well thought out and planned efficiently. But considering the shortage of protein stocks for mixed feed we are trying to distribute the stocks of hydrolytic and alcoholic feed yeast so that the planned formulas developed and approved by the Ministry for the first half of the present year are satisfied at all plants by a high-grade stock of mixed feeds."

It all seems to be clear: they are also concerned about highly efficient output of concentrated feeds at the main administration. But certainly this should be done not at any price whatsoever but competently, carefully, economically, with an efficient, scientifically valid plan. Then neither the enterprises which manufacture feed yeast nor the farms which produce the products of animal husbandry will be the worse off for it. But this is not being taken into consideration.

9380
CSO: 1811

MERITS OF GRAIN STORAGE IN METAL SILOS DISCUSSED

Moscow STROITEL'NAYA GAZETA in Russian 10 Feb 80 p 3

[Interview with Yu. Baranskiy, head engineer of Soyuzelevatorstroy Association by I. Svirin: "Metal Silos"]

> [Text] Experimental construction of metal elevators has shown that they are less labor-intensive and more reliable to use than elevators with other design decisions, and considerably less time is spent on their installation.
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> A year has passed since the USSR Ministry of Procurements has created the all-union association for the construction of elevators with metal silos: Soyuzelevatorstroy. Our correspondent, I. Svirin, asked the association's head engineer, Yu. Baranskiy, to discuss how the establishment of subdivisions of Soyuzelevatorstroy is proceeding and what the first practical steps of the collectives are.

[Question] Yuriy Panteleymonovich! A new subbranch is being created in elevator construction. Soyuzelevatorstroy is one of the participants in the development of this subbranch. Tell us, please, when the association's subdivisions will have the first metal grain containers ready.

[Answer] In order for the readers to have a clear idea of the volume of the work, I shall give a couple of figures. Already this year we shall begin the construction of 28 metal elevators with a capacity of almost 400,000 tons of simultaneous grain storage. We shall put 11 of these into operation, with a capacity of 154,000 tons.

Under the Eleventh Five-Year Plan the association should construct metal grain storage facilities with an overall capacity of 2.6 million tons. Moreover, we are committed to renovate and carry out capital repair on existing mixed feed plants, mills and other facilities of grain receiving and grain processing enterprises, and also to perform startup and adjustment work. The area in which our subdivisions are working is extremely great; with the exception of the RSFSR we shall construct metal elevators on the territories of all the union republics.

(Question] What is the structure of the association?

[Answer] We are increasing the capacities of the 12 previously existing subdivisions at accelerated rates and we are constructing new ones locally. Last year we organized three specialized mobile mechanized columns and two trusts. The Elevatorremstroy Trust is organizing construction in Belorussia, Moldavia, the Baltic republics and the Ukraine, and the Sredaelevatorstroy Trust--in Uzbekistan, Kirgizia and Tadzhikistan. This year eight more specialized mobile mechanized columns will be organized as well as a trust in Alma-Ata.

A planning and design bureau has been created within the association. Its specialists are engaged in the development of economical metal structures and assembly devices, as well as the introduction of advanced technology for their manufacture at enterprises. The designers are also obliged to participate in the installation at the construction sites.

[Question] And how are your plans supported by material and technical resources?

[Answer] First of all, we are developing our own production base. Last year in Minsk we put into operation a shop for semimanufactured coils of strip metal for 180 silo set with an overall capacity for simultaneously storing 350,000 tons of grain. The construction of this enterprise is continuing. Next year we shall begin to construct an experimental mechanics plant in Tashkent. In a word, during three years we shall provide all construction organizations with powerful bases. They have already been allotted machines, mechanisms, equipment and automotive transportation for special purposes.

[Question] Tell us about the designs that have been accepted for production.

[Answer] Institutes of Glavpromzernoproyekt of the USSR Ministry of Procurements have developed three types of metal grain storehouses: made of rolled metal with capacities of 1,800 and 3,000 tons and also made of rolled sheets, which are being constructed by the coiling method, with a capacity of 3,000 tons. The latter method of preferable. It saves 13 rubles per thousand tons of capacity and 21 kilograms less metal is used. Silos made of rolled sheets can be constructed in only a couple of days with two machines--a sectioning machine and a seaming machine. The sequence of the work is as follows: they build the assembly circle on a circular foundation and then, using a folded seam, the machines join the steel strip and construct the cylindrical wall of the silo along a continuous spiral "from top to bottom." The speed of the coiling is 6 meters per minute. The machines are handled by 6-7 fitter-installers. There is no need for large-capacity cranes or special transportation here. The great efficiency of this method was convincingly confirmed during the course of the construction of five silos of the Tiraspol' grain products combine.

[Question] You mean that no special problems arise?

[Answer] Not exactly. We are very concerned by the great labor-intensiveness of the work of zero cycle. Especially the construction of the troughs that are intended for the removing of the residual grain from the silos. Large expenditures of manual labor are required here and this reduces the economic effectivness of metal elevators. We need the help of scientists and designers in order to solve this technical problem.

Now we have to use anticorrosive covering on the walls of the silos at the construction site. This should be done during the process of producing the rolled metal sheets at the enterprises of the USSR Ministry of Ferrous Metallurgy. Solving this problem will be repaid 100-fold.

11772
CSO: 1824

TILLING AND CROPPING TECHNOLOGY

NEWSPAPER SERIES ON SWEEP TILLAGE REVIEWED

Kiev SIL'S'KI VISTI in Ukrainian 28 May 80 pp 2-3

[Article by F. Morhun, First Secretary Poltavskiy Obkom, Ukrainian Communist Party on: "Sweep Tillage: Experience, Prospects"]

> [Text] Last year an article by the First Secretary of the Poltavskiy Obkom, Ukrainian Communist Party, F. T. Morhun "Friendship Between the Field and the Sweep" was printed in four issues of our paper (17, 18, 20 and 21 July). The article stimulated wide response evident in later issues of "SIL'S'KI VISTI" and in the numerous letters received by the author himself. For those who participated in the article discussion, the Poltava area experience represented a means of fundamental change in land farming practices by extending the use of sweep soil tillage.
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> Today the editors again let F.T. Morhun speak. This time he generalizes the discussion summary and adds supplemental information resulting from new directions in improving sweep tillage on farms in the Poltava area.

An account of the Poltava area experience was the basis for the article "Friendship Between the Field and the Sweep". It dealt with the fate of the 1980 winter crop harvest which originated in conditions of an unusually droughty summer. Only a truly creative approach to tilling the predecessors for winter wheat could solve the problem.

Therefore, the quick reaction to the article by winter wheat expert, twice Hero of Socialist Work, Director of the Myronivskyy Scientific Research Institute on Selection and Wheat Seed Growing, Academician V. M. Remeslo was perfectly understandable to me. 'Vasyl' Mykolayevych, with his understanding of factual essence, using important arguments from the experience of Poltava farmers and citing conclusions by erosion scientists stated unequivocally: "Surface tilling provided a second breath for winter wheat because it guaranteed the appearance of even sprouts within better agrotechnological dates regardless of weather conditions in the fall. This condition made me an active supporter of the sweep system tillage."

It is well, indeed, that the republic's farmers listened to the voice of experience in agricultural science. The Poltava area, where a special seminar was held in accordance with a decision by the CC Ukr Communist Party, was visited by representatives from all oblasts. They saw with their own eyes that sweep equipment prepared the soil much better for sowing than the plow even after most unfavorable predecessors. Those who correctly evaluated the Poltava area experience were able to conduct pre-sowing tillage sooner and obtain even sprouts with less valuable moisture loss.

On the other hand, as we expected, a much wider problem - the general prospects for sweep tillage became the subject of discussion also.

Specialist and farmer responses from our oblast and from others also point to the interest with which the article entitled "Keys to Field Fertility" was generally received. The author of the article, doctor of agricultural sciences, professor and chairman of the Soil Science and Geology Department of the Ukrainian Agricultural Academy M. K. Shykula provided concrete evidence for the use of sweep tillage in the future.

✓ "SIL'S'KI VISTI" pages provided also other convincing statements from scientists. The head of the Novoodes'ka Strain Testing Station, honored Ukr SSR agronomist, candidate of agricultural sciences I. Ye. Shcherbak, in particular, was completely justified in stating that experience has proved the advantages of sweep tillage. In the eighteen years of station experience he has accumulated perhaps the most important scientific data in our republic dealing with the affect of surface tilling equipment on the yield of various crops, the amount of weeds in the fields, etc.

The article "Cherkassy Area Experience" may be called a fusion of scientific thought and production. As an agronomist and party worker, I am always very interested in the experience of farmers and scientists in Cherkasskaya Oblast. It was these people who expressed themselves for surface soil tillage and at the same time shared their extensive experience in tilling the predecessor for peas.

It should be noted that the response geography was markedly expanded by the letters I received from Odesskaya and Donetskaya Oblasts, from Rostovskaya, Central-Chernozem Oblasts of RSFSR, also from Moldavia and Belorussia.

Returning to what was printed, I would like to provide some essential supplemental data to the already familiar to the reader Poltava area experience in introducing and improving sweep soil tillage.

There was no rain last year from April 23 until July 7 in the territory of our oblast. Plants also suffered because of an unusual air dryness. In these conditions crops in areas of sweep tillage withstood the weather conditions better. On the experimental farm of the Poltavskaya Oblast Research Station winter wheat after sweep tillage yielded 51.6 quintals of grain per hectare, whereas after plowing only 41.3 quintals. In the kolkhoz imeni Zhdanov, Lubenskiy Rayon, harvest increase on fields tilled without plows amounted to 9.4 quintals, in the kolkhoz "Druzhba", Kozel'shchinskiy Rayon - 8.9 quintals, in the sovkhoz imeni Krups'kyy, Globinskiy Rayon - 10.2 quintals, in the sovkhoz of the Veselonodil'skiy sugar combine 12.7 quintals were harvested per hectare.

The new technology assured an increase of 8.8 quintals per hectare on farms in the Gadyatskiy Rayon, 7.7 quintals in Reshetilovskiy Rayon, 6.5 in Khorolskiy Rayon, 6.1 in Lubenskiy and 5.2 quintals per hectare in Lokhvitskiy Rayon.

Spring barley yielded a considerable harvest after sweep tillage. At the kolkhoz imeni Hohol', Mirgorodskiy Rayon, fields prepared using the new method yielded 33.8 quintals per hectare against 14.1 quintals from plowed fields. Each hectare of the barley field after sweep tillage yielded an additional 9.4 quintals at the experimental farm of the Poltavskaya Oblast Research Station, at the kolkhoz imeni Illich, Lokhvitskiy Rayon 8.3 quintals, at "Zorya", Piryatinskiy Rayon 10.1 additional quintals of grain.

In the six years since the introduction of the new technology of soil tilling, the oblast obtained an additional 504,000 tons of grain and an income of 48 million rubles. Actual facts convinced Poltava farmers that this method yields excellent results.

Summing up the discussion, I would like to consider two fundamental questions in agrotechnology which, up to now, are given completely opposite explanations by the proponents and opponents of the new technology.

Some scientists simply insist while experienced specialists planning to start sweep tillage openly express a fear that without the plow weeds will multiply markedly infesting fields and crops. The first must be told a definite 'no', and the second group must be assured that nothing of the like will happen.

Sweep tillage is much more effective in combatting weeds. Even more, research on our farms and scientific-research institutions has shown that sweep-like machinery available on a farm, which the agronomer may use according to the real needs in the field, gives him the opportunity to lower weed infestation by one and a half to two times compared to plowing. But the idea of plow tillage is still quite alive and its proponents are anxious to find fault with surface tillage. Now they say: We agree that the sweep can take care of annual weeds and sow-thistles...

It is absolutely clear for all those who have already worked with the sweep that no other equipment assures better methods of removing sow-thistles from the fields. Contrary to the plow, the sweep allows for repeated and varying depth field tillage with minimal moisture losses. The sweep can combat thistles without the use of herbicides. It might as well be remembered that weeds are not found on farms with poor equipment but rather on farms where there are poor agronomists.

Sweep opponents claim also that the plow is the only equipment which can be used for covering manure with soil. At this point, whether you want to or not, you must use a plow unit. But the problem must be presented differently: As much manure should be applied as possible, and the agronomist must decide what equipment should be used. When the time comes for manuring it should be taken out and plowed in. But this can be managed without plows also. At the kolkhoz "Bil'shovyts'ka Pratsya" and "Progres" in Karlivskiy Rayon, on a number of farms in the Lokhvitskiy, Novosanzharskiy, Chutivskiy and other rayons in the Poltava area very good results are obtained from top dressing the soil with manure during sweep tillage.

This is how O. I. Martynets', agronomist at the kolkhoz "Bil'shovyts'ka Pratsya" solved the problem on a 70-hectare field for the 1979 harvest of winter wheat. The area required additional top dressing since it was covered by stubble and winter crops had to be sown there. In the beginning disk-type stubble mulchers were used distributing mechanically 35 tons of organic fertilizer calculated per hectare; later the field was again tilled. After that a unit consisting of cultivator-sweeps and needle harrows was sent over the field. The fertilizer and the layer of soil were well mixed to a depth of 10-12 cm as needed. The well prepared field thus yielded an additional 5 quintals of grain per hectare (compared to areas tilled with plows).

Sweep tillage does not restrain, on the contrary favors field improvement. The following summarizes data from the oblast. Compared to the beginning of 1970-ties our kolkhozes and sovkhozes now utilize every year almost 6 million tons of local fertilizer more than previously. Last year almost 15.5 million tons were transported to the fields, or almost 9 tons per hectare of arable land. Therefore, a definite possibility exists for top dressing two fields in crop rotation instead of one. This is the result of sweep tillage.

In a number of oblasts, the Poltavskaya among them, this year some individual areas of winter wheat crops after unfallow predecessors were damaged by grain click beetles. Sweep opponents tried to tie this in to surface and sweep soil tillage. The reason, however, does not lie in the method of soil working, but in allocating winter crops after stubble predecessors. Scientists and specialists confirm this. Recently, the author received a letter from the director of the Prysyvashs'ka Agro-Forest-Reclamation Research Station, doctor of agricultural sciences M. M. Myloserdov who writes about the high effectiveness of sweep tillage in Khersonskaya Oblast and states:

"This year we noted the loss of some winter crops after unfallow predecessors because of click beetles. Many agronomists and kolkhoz and sovkhoz managers blame this on surface and sweep tillage. Our observations, however, show that where timely surface or sweep soil tillage was accomplished and there were no weeds or fallen grain, the condition of winter crops after unfallow predecessors was good, and crop damage due to click beetles was nonexistent or minimal.

Where soil tilling was delayed and weeds and fallen grain were present spring click beetles destroyed winter crops on surface tilled fields as well as those worked with a plow.

For greater effectiveness surface and sweep tillage must be accomplished within specific times, utilizing complex units with a cultivator-sweep, B16-3 harrow and a cultipacker. We saw a unit like that at the republican seminar in August 1979 in Poltava, used it and the results are excellent. Where the complex unit was used winter wheat plant development, their sowing density after unfallow predecessors, is in no way less effective than fallow wheat, there is almost no plant loss because of click beetles."

Plow proponents, giving in somewhat recently with respect to the grain field, now center their discussion on the sugar beets. We can even hear their call: We will save beet plantations from the sweep! The question comes up: Why should the sugar beets be "saved"?

The basic argument for these statements is that organic fertilizer cannot be applied under the sweep. But we have already discussed this problem above. Let me add, manure covering utilizing sweep technology is no longer experimental, and is being widely applied in production. For example, 3.9 thousand hectares of oblast ploughland were prepared in this manner for the 1980 sugar beet harvest.

Research results conducted at the Veselopodolyans'ka Research Selection Station back in 1974-1976 provided the basis for the conclusion that sweep tilling does not lower the beet harvest, in fact, a tendency may be observed towards an increase in beet sugar content. Later Poltava area scientists conducted new experiments including ten different variants of equipment and operational procedures. Summarizing 1978-1979, seven versions of sweep tillage also yielded an increase in the sugar harvest per area unit.

All other versions yielded about the same level of sugar raw material, but the sugar content of beet roots after sweep tillage was 0.5-0.6 percent higher than after plowing. Sugar harvest per hectare was 1.6-4.4 quintals higher. Sweep tillage losses were considerably lower than from deep plowing.

Another matter should be noted. During the last five years, in conditions of wide sweep soil tillage practice, the gross production of sugar beets in the Poltava area increased by 31 percent. This is the largest increase in all the oblasts of the republic. Considering the fact that Poltava area farmers have not yet utilized all the reserves of the beet fields, we nevertheless have a basis for stressing the positive effect of the new technology on the production increase of this valuable raw material.

Having considered this extensive experience on the introduction of sweep tillage, specialists from all farms in two rayons Karlivskiy (in the transit zone between the Steppe and Forest-Steppe Zone) and Lokhvitskiy (border Forest-Steppe and Polissya) decided to change over completely from plowing to sweep tillage agriculture. Even more, almost the whole Poltava area is ready to take this new step as was indicated in the discussion of this decision at the recent oblast scientific production conference, providing there is enough sweep equipment available.

Unfortunately, none of the sweep tillage opponents took part in the discussion of the article "Friendship between the Field and the Sweep" on "SIL'S'KI VISTI" pages. A work dispute, an open confrontation of opposing thoughts is always beneficial. It is worse when the opponent's criticism is meant only to discredit, tendential arguments are spread along with invented data. For example, the magazine "KHLIBOROB UKRAYINY" (No. 4, 1980), claims that research conducted by the institute using sweep tillage under grain crops has shown that the amount of weeds in three years almost doubled, and in five years it increased eight times.

One wonders why institute scientists obtained such strange amounts of weeds on their areas of sweep tillage. The answer is simple: They transferred to the Ukrainian field a strictly virgin soil agrotechnology and using their own calculations are reaching completely incorrect conclusions.

The resistance of some scientists to an objective expansion of the new soil tilling system can be explained, in our opinion, by these basic reasons:

The absence of their own understandable research on the effectiveness of sweep tillage and the burden of statements favoring plowing.

Stereotyped research testing of the standard variant of sweep tillage, prepared and effective in conditions prevalent in Northern Kazakhstan, without creative revision for the soil-climatic conditions in the Ukraine. For example, in most of the experiments conducted by scientific-research institutions in the republic the stubble seeder SZS-2.1 was used for sowing. It was excellent for use on virgin soil, but is of little use for winter and spring grain crops in most of the better moisturized rayons of our republic because it lowers the yield through the large width of interrows.

The prejudice of some scientists against sweep tillage has caused an artificial decrease in requests for sweep machinery, the lack of well thought-out experiments in improving sweep soil tillage in many agricultural institutes and research stations, a neglect of the problems of soil protection in sweep tillage in study programs in colleges, technical schools, vocational training schools, and departments for raising the qualifications of leading agricultural personnel.

The attitude of these scientists is felt also in agricultural ministries and departments which do not yet have a fair evaluation of sweep type equipment and do not plan on increasing their production claiming that there are not enough requests. This does not consider the fact that there are few requests because the agronomists in most kolkhozes and sovkhozes in practice know very little about sweep tillage technology, and it is difficult to judge without seeing.

I believe it would be useful to formulate the theoretical conditions for the soil-protecting sweep system of agriculture.

1. Utilization of sweep tillage has a positive effect on soil processes and conditions. Humus decomposition lessens in the soil; humus is the cement for soil structure, a storage place for nutrients and an indication of the level of field fertility.

2. Sweep tillage technologies for raising crops allow for additional 15-25 mm of productive moisture in the meter layer of soil, and this occurs during sowing. It is especially important for obtaining even sprouts.

3. The system of sweep machinery and equipment allows for more effective weed control. In research experiments and in the experience of the Poltava area people, weed crop infestation in sweep tillage was 1.5 - 2 times lower than during regular plowing.

4. Finally, new equipment permits better tillage, it is cheaper, and crops can be sown within optimal agrotechnological dates.

The new system is vitally needed. This was proven by Academician V. M. Remeslo's deep conviction in the advantages of sweep tillage, fundamental scientific research by prof. M. K. Shykura in the Ukrainian Agricultural Academy, scientists I. Ye. Shcherbak at the Novoodes'ka Strain Testing Station, Nikolayevskaya Oblast, M. M. Martynovych at the Verkhnyats'ka Research Selection Station, scientists at the Poltava

Agricultural Institute, the local agricultural research station and other scientific-research institutions, and also wide production experience of farmers in Zaporozh'e and Nikolayev area in the Steppe, Poltava and Cherkassy area in the Forest-Steppe Zone.

This new agricultural system is moving onto the fields of kolkhozes and sovkhozes. It is widely needed not only in the Ukraine but also for other rayons of the European USSR, particularly for the chernozem zone. The faster and wider application it receives, the more important will the gross grain, feed and other crop harvests become.

It should be noted, however, that problems of sweep tillage do not as yet receive the needed attention. Too few scientific institutions are involved with it. Unfortunately, there is almost no concern for sweep tillage by "agrokhimsluzhba" /Agricultural Chemical Service/, economists, specialists in plant protection, microbiologists and soil experts.

The new agricultural system is a complex problem, therefore, it must be solved in a complex manner. The future is in its favor.

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